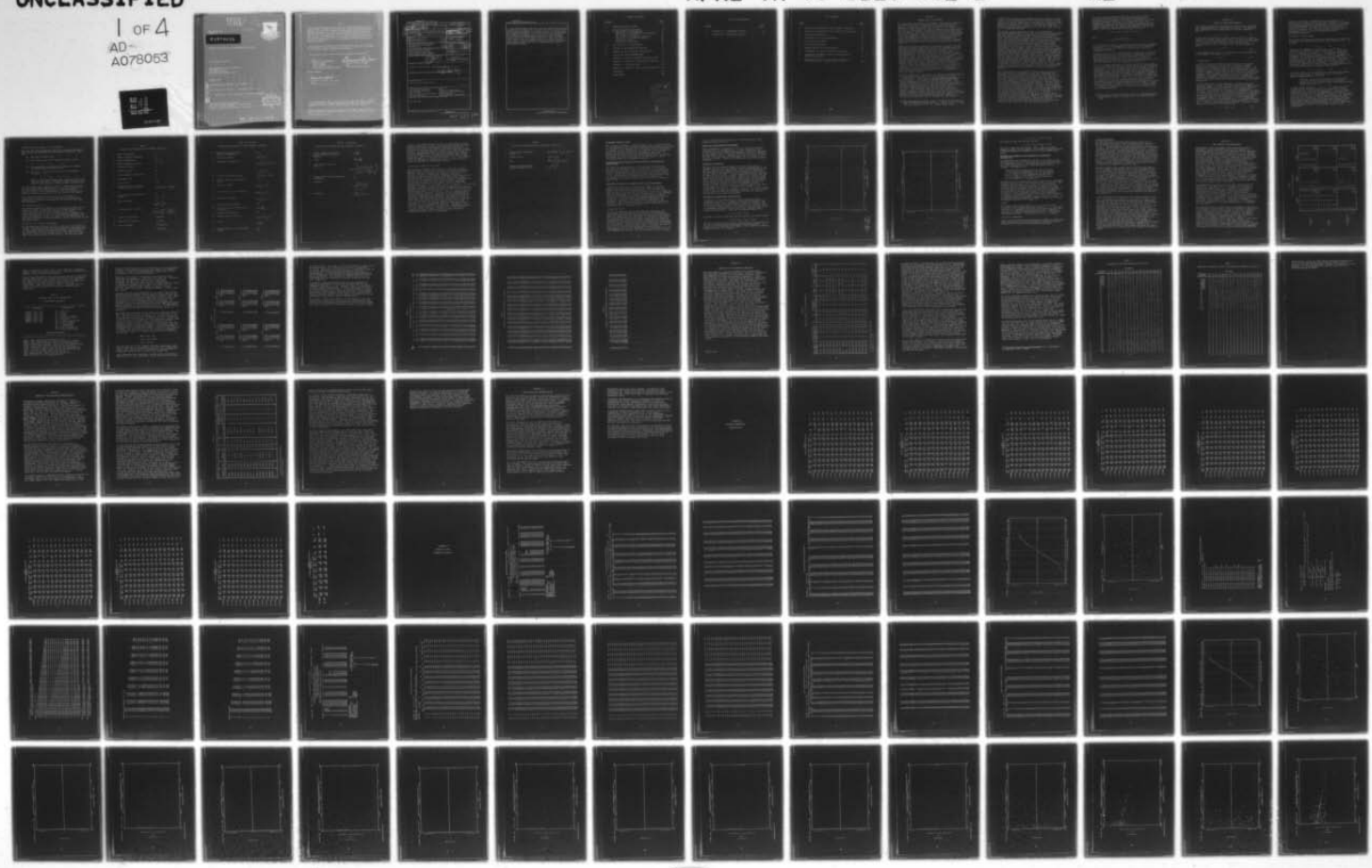
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PREDICTIVE OPERATIONS AND MAINTENANCE COST MODEL

Dr. Erasmus E. Feltus

Westinghouse Electric Corporation
Mail Stop 7374
1111 Schilling Road
Hunt Valley, Maryland 21031

August, 1979

TECHNICAL REPORT AFAL-TR-1120, VOLUME II

Final Report for Period July 1978 - June 1979

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This technical report has been reviewed and is approved for publication.

David V Ferens

DANIEL V. FERENS
Project Engineer
System Evaluation Group
Avionic System Engineering Branch

Eugene E. Jones

EUGENE E. JONES, Lt Col, USAF
Chief
Avionic Systems Engineering Branch

FOR THE COMMANDER

Raymond E Siferd

RAYMOND E. SIFERD, COL, USAF
Chief
System Avionics Division

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This report describes a model which can be used to estimate the operations and support costs of avionics line replaceable units (LRU's). The model relates available LRU design parameters to operations and support costs using various cost estimating relationships. This document is Volume II of the final report which describes the development of the revised version of the Westinghouse Avionics Laboratory Predictive Operations and Support (ALPOS) cost model developed in 1977-1978 and described in AFAL-TR-78-49. This revised version, known as ALPOS II, has a more expansive data base than ALPOS and includes digital avionics systems not included in ALPOS. The Air Force Program Monitor was Mr. Daniel V. Ferens, System Evaluation Group (AFAL/AAA-3), Avionics System Engineering Branch.

TABLE OF CONTENTS

SECTION		PAGE
I.	INTRODUCTION AND OVERVIEW	1
II.	MULTIPLE REGRESSION ANALYSIS	4
	The Method of Least-Squares	5
	Assumption of the Method of Least-Squares	6
	The "Global" Statistics	6
	The "Local" or "Interior" Statistics	6
	Statistical Printouts and Tables	10
	Statistical Plots	12
	Statistical Techniques	16
III.	THE "DESIGN OF THE EXPERIMENT"	18
IV.	RESULTS OF THE REGRESSION ANALYSES	27
V.	RESULTS OF THE VALIDATION INVESTIGATION	34
VI.	CONCLUSIONS AND RECOMMENDATIONS	39
	APPENDIX A MULTIPLE REGRESSION ANALYSIS DATA	41
	APPENDIX B RESULTS OF THE REGRESSION ANALYSIS	52
	APPENDIX C VALIDATION DATA	237
	APPENDIX D RESULTS OF THE VALIDATION ANALYSIS	239
	REFERENCES	368
	BIBLIOGRAPHY	369

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LIST OF ILLUSTRATIONS

FIGURE		PAGE
1.	Residuals vs. Independent Variable	14
2.	Residuals vs. Independent Varibles	15

LIST OF TABLES

TABLE		PAGE
1.	Notation and Formulas for the "Global" Statistics	7
2.	Notation and Formulas for the "Interior" Statistics	11
3.	Qualitative Categories	19
4.	Variables Used in the Regressions	20
5.	D-Statistics and Means	22
6.	Data Ranked by Weight	24
7.	Summary Results of the Regressions	28
8.	Independent Variables Selected for each Fit	31
9.	Independent Variables (without transformation) Needed for each Fit	32
10.	Validation Results of the Cross Verification of Coefficients with a Second Sample of Data	36

SECTION I

INTRODUCTION and OVERVIEW

For many years researchers in government, business and industry have been interested in developing means of predicting the future. Usually these predictions or estimates are highly dependent on past experiences, as the past is a reliable guide to the future. Thus studies are made to predict such things as the time it takes to complete construction of a building based upon the size of the labor force, the current gain of a transistorized electrical component based on its sheet resistance and diffusion time, the demand for a product (such as energy) based upon its price, the amount spent on advertising and expenditures on product distribution, the cost of a piece of avionics equipment based upon its physical and electrical characteristics, and so forth.

There have been many approaches to prediction ranging from hard objective evidence to pure speculation. The approach taken in this study has been used for over a century and is an area of statistics called regression analysis. Inherent in the interpretation of the words "prediction" or "estimate" is the term uncertainty. It would be nice to make "exact" predictions, but this is rarely the case when dealing with a mass of statistical data. Thus, statisticians do not profess to estimate exactly, rather they profess that their predictions are "on the average" reasonably close. The basic concept of regression analysis then is to estimate the average value of a given variable (called the dependent variable) in terms of the known values of one or more other variables (called independent variables). Regression analysis expresses the relationship of these variables by determining the form of a mathematical equation connecting them.

The major reference on the subject of regression analysis that is noted throughout this report is a book written in 1971 by C. Daniel and F. Wood entitled Fitting Equations to Data (1) which describes a most powerful computer program called the "Linear Least-Squares Curve-Fitting Program" (LLSCFP). The proposals presented in (1) have been successfully discussed in seminars at many distinguished worldwide universities as well as the Bell Telephone Laboratories and the National Cancer Institute. The LLSCFP has also been the most sought after program in both the SHARE (IBM) and VIM (CDC) libraries of computer programs, and has also been converted to run in East Germany and Russia. These techniques have been applied in a wide range of areas including studies by government agencies of variables for pollution control, searches for influential

---

(1) Fitting Equations to Data, Computer Analysis of Multifactor Data for Scientist and Engineers, C. Daniel and F. S. Wood with the assistance of J. W. Gorman, Wiley, (1971).

variables which cause cancer, studies to estimate hospital costs, studies in the conservation of energy and the evaluation of moon rocks at the Johnson Space Center. In addition a Bureau of Labor Statistics study has shown that the coefficients estimated by the LLSCFP are accurate to 15 digits. It is felt then that the proposals and techniques presented in (1) are the "state of the art" in Regression Analysis.

The purpose of this particular study is to estimate the Operations and Maintenance (O&M) cost of avionics equipment based upon the equipment's physical and electrical characteristics, avionics area and type of aircraft in which the equipment is used. The tool used to estimate avionics O&M cost is a computer model developed by Westinghouse Logistics Engineering for the Air Force Avionics Laboratory (AFAL) and is called the Avionics Laboratory Predictive Operations and Support (ALPOS) Model. ALPOS basically consists of fifteen estimating relationships developed for the logistics, support and cost parameters: Mean Time Between Failure (MTBF); Mean Time Between Maintenance Action (MTBMA); Total Maintenance Manhours per Operations Hour (MHTOT); Unscheduled Maintenance Manhours per Operating Hour (MHUNS); Shop Maintenance Manhours per Operaing Hour (MHSHO); Total Logistics Support cost per Operating Hour (LSCTO); Field Logistics Support Cost per Operating Hour (LSCFD); the fraction Not Repairable This Station (NRTS); Depot Specialized Repair Activity (SRA) costs; and the Training Cost per Operating Hour (TRAIN). The approach to developing ALPOS was to collect data consisting of 20 independent variables covering a wide spectrum of aircraft types, avionics areas and levels of complexity and to develop cost and parametric estimating relationships via multiple regression analysis.

Many researchers are interested in determining some casual (i.e., cause-and-effect) relationships between the independent and dependent variables with specific emphasis on the magnitude of the regression coefficients. Their main objective then is to determine the correct functional form of the relationships. There are examples in regression analysis that have an assumed form of the estimating relationships based on a previous study or on technical knowledge of the process studied. However, there has been no previous study devoted to developing relationhsips for variables of avionics equipment in as many as 20 independent variables, nor is enough known about avionics equipment that will lend to technical knowledge of the correct functional form. In this study, however, the main objective is to develop (estimating) relationships which can be successfully used to predict future events, where all independent variables which are "assumed" to have an influential affect on the dependent variable to be estimated are simultaneously considered where the statistics and techniques lead the direction in obtaining the equations that yield the "best" possible predictions.

The ideal situation would by that both objectives (correct functional form and useful estimating relationships) are accomplished simultaneously. To assist in obtaining the "best" possible equations, three forms or transformations of the independent variables (namely the variable, its square and its natural logarithm) and two forms of the dependent variable (the dependent variable and its natural logarithm) are used in this report. Thus, such complicated functional forms as:

$$y = b_o + b_1 x_1 + b_2 x_2^2 + b_3 \ln x_3 + \ldots$$

and

$$y = b_o e^{b_1 x_1} e^{b_2 x_2^2} x_3^{b_3} \ldots$$

are considered as means of estimating advanced avionics equipment costs, where y is the dependent variable, x_i's the independent variables, b_i's are the regression coefficients, and e the exponential function.

A prerequisite for using these prediction equations is that the physical and electrical characteristics (independent variables) for the proposed piece of avionics equipment for which a dependent variable estimate is desired, must be within the multidimensional region covered by the regression data, i.e., the equation should be used for interpolation purposes.

It is to be emphasized that the "total picture" of the results that are displayed and analyzed, with the intent of quantifying the reliability of the relationships developed, includes over thirty statistics, five types of plots, and several techniques and different tabular arrangements of the data that are available in the computer printouts of the LLSCFP. This document includes a discussion of the concepts of regression analysis including the plots and techniques used. Volume II of the Phase I final report (2) includes a discussion of the statistics used, in addition to a sketch of an example demonstrating the approaches and procedures utilized to develop the parametric estimating relationship for the support parameter MTBMA, using the Phase I - data. This document also includes a discussion of the techniques used to attempt the demonstration of the predictive validity of the relationships developed.

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(2) Avionics Laboratory Predictive Operations and Support Model, Final Report, (Phase I) Volume II, E. E. Feltus, March 1978.

SECTION II

MULTIPLE REGRESSION ANALYSIS

Very often in practice a relationship connecting two variables (one independent and one dependent) is desired. The equation most widely used is the linear equation (in two unknowns β_o and β_1),

$$y = \beta_o + \beta_1 x_1 \tag{1}$$

If all pairs of values of x_1 and y, when plotted in a scatter diagram on ordinary graph paper, fall on or near a straight line, equation (1) is the correct form of the relationship to be used. If in a scatter diagram plotted on semi-log paper, the observations fall near a straight line, then the exponential curve,

$$y = \beta_o e^{\beta_1 x_1} \tag{2}$$

is the appropriate choice. If a straight line is obtained on log-log paper, the geometric curve,

$$y = \beta_o x_1^{\beta_1} \tag{3}$$

is appropriate.

In many cases, as in estimating advanced avionics equipment costs, one independent variable does not provide enough information to accurately predict the dependent variable. For instance, if an estimate (using a regression equation) of the Logistics Support Cost Per Operator Hour (LSC/OH) of a piece of avionics equipment is desired, the use of only the weight of the equipment (one independent variable) can lead to less precise estimates and unstable regression equations. Considering additional independent variables can, in most cases, lead to more accurate estimates, since more information should lead to better predictions.

In this study there are 20 independent variables initially considered which are assumed to have a significant impact on the logistics, support and cost parameters of avionics equipment. The problems of fitting an equation to data becomes more difficult to disentangle as the number of independent variables increases. When two or more independent variables are considered in a regression exercise, scatter diagrams and other graphical methods are often useless when trying to determine the form of the assumed equation. For instance, if the two independent variables x_1 and x_2 are considered, an x_1 - y scatter diagram might indicate a high linear relationship whereas the x_2 - y and x_1 - x_2 scatter diagram may show no apparent correlation, even though the true form of the equation is

$$y = \beta_o + \beta_1 x_1 + \beta_2 x_2 \tag{4}$$

Therefore, graphical techniques are not considered as an alternative to finding the correct form of equation to be used when multiple variables are considered. Instead the extensive use and simultaneous critical examination of many types of statistics ("Global" and "Local"), statistical printouts and tables, statistical plots and statistical techniques are performed in order to find the equation which best approximates the data.

THE METHOD OF LEAST-SQUARES

The form of the equations considered throughout this report can be written (or transformed) into the linear equation in $(\kappa + 1)$-unknowns

$$y = \beta_o + \beta_1 x_1 + \ldots + \beta_\kappa x_\kappa \qquad (5)$$

where y is the dependent variable, $x_1,\ldots,x_\kappa$ and the κ - independent variables, β_o (the constant) and κ - coefficient $\beta_1,\ldots,\beta_\kappa$ make up the unknown $(\kappa + 1)$ population parameters. Also it is assumed that there are N observations (pieces of equipment) in the sample indexed by j. Thus y_j represents the (observed) jth observation of the dependent variable and x_{ij} the jth observation of the ith independent variable. Regression analysis requires that the analyst find statistics $b_o,b_1,\ldots b_\kappa$ which "best" approximate the unknown $(\kappa + 1)$ population parameters (where we have taken a sample from the population of *all avionics equipment*), *and whose fitted equation*

$$Y = b_o + b_1 x_1 + \ldots + b_\kappa x_\kappa \qquad (6)$$

gives the "best" possible prediction. The method most widely used by statisticians to accomplish this is called the <u>method of least-squares</u>, which says:

> "Find the values of the constants in the assumed equation that minimize the sum of the squared deviations of the observed values from those estimated by the equation."

In other words, minimize $Q = \sum_{j=1}^{N} (y_j - Y_j)^2$, where Y_j is the estimate of the jth observation of the dependent variable obtained by (6). Once the estimates $b_o,b_1,\ldots,b_\kappa$ are found, substituting the values of the independent variables in (6) *yields the estimate of the dependent variable Y.* We thus find ourselves in an area of statistics called "Inductive Statistics" which uses the concepts of "Statistical Inference" to make generalizations (or estimates) of population parameters based upon a given sample of the population, and to quatify the reliability of the estimates obtained. In order to make these generalizations, however, the data must satisfy certain assumptions.

ASSUMPTIONS OF THE METHOD OF LEAST-SQUARES

There are four major assumptions which the data must satisfy in order to use the techniques of least-squares estimation. They are:

A1. The data is "good" data.

A2. The correct form of the equation has been chosen.

e.g., $y = \beta_o + \beta_1 x_1 + \ldots + \beta_K x_K$

A3. The independent variables are constant, non-random variables, measured without error.

A4. All error is in the observations of the dependent variable y , i.e.

$$y_j = \beta_o + \beta_1 x_1 + \ldots + \beta_K x_K + e_j$$

where e_j represents random error. Moreover, the e_j are normally distributed independent random variables with mean zero and constant, though unknown, variance $\sigma^2(y)$.

If all the above four assumptions hold or "approximately" hold, then the least-squares approach will give the best estimates of the coefficients in the relationships. Past experiences, however, indicate that slight departure from the assumptions of normality and equal variances has little effect on the results.

Since these assumptions are the basis for the method of least-squares estimation and hence regression analysis, much emphasis must be placed in determining how close the data fits the assumptions.

THE "GLOBAL" STATISTICS

As stated previously, in addition to estimating the coefficients, a means is needed to determine how "good" these estimates are. Table 1 gives the notation and formulas for 36 "global" statistics which must be used and simultaneously considered to verify the "goodness of fit" of the relationships obtained. The reader is referred to Volume II - Phase I for an explanation of what these statistics are and how they are used in this study to fit equations to data.

THE "LOCAL" OR "INTERIOR" STATISTICS

All the previous statistics in Table 1 fall under the heading of "global" statistics in that they are statistics of the entire set of data. The "global" statistics are helpful in determining how the independent variables influence the fitted equations, but they do not describe how the observations (the interior of the data) in multifactor space affect the fit. The four innovative

TABLE 1

Notation And Formulas For The "GLOBAL" Statistics

1.	Number of observations.	N
2.	Number of independent variables.	K
3.	Index for observations.	$j=1,\ldots,N$
4.	Index for independent variables.	$i=1,\ldots,K$
5.	Independent variables.	x_i
6.	Dependent variables.	Y_i
7.	Unknown parameters (coefficients).	βj
8.	Measurement error.	e_j
9.	Error variance.	$\sigma^2(y)$
10.	Statistical Model: error normal, independent, constant variance.	$y_j=\beta_o+\beta_1 x_{1j}+\ldots+\beta_k x_{kj}+e_j$
11.	Sums of variables (independent and dependent).	$\sum_{j=1}^{N} x_{ij}$; $\sum_{j-1}^{N} y_j$
12.	Means of variables.	$\bar{x}_i=\frac{\sum_{j=1}^{N} x_{ij}}{N}$; $\bar{y}=\frac{\sum_{j=1}^{N} y_j}{N}$
13.	Root mean squares of variables.	$s^2_{x_i}=\frac{\sum_{j=1}^{N}(x_{ij}-\bar{x}_i)^2}{N-1}$; $s^2_y=\frac{\sum_{j=1}^{N}(y_j-\bar{y})^2}{N-1}$
14.	Maximum value of variables.	$\max_{xi}$; $\max_y$
15.	Minimum value of variables.	$\min_{xi}$; $\min_y$
16.	Range of variables.	$w_i=\max_{xi}-\min_{xi}$ $w_y=\max_y-\min_y$

TABLE 1 (Continued)

Notation And Formulas For The "GLOBAL" Statistics

17.	Elements of the Inverse Matrix (method of determinants).	C_{ij}
18.	B(o) value (estimate).	$b_o=\bar{y}-\sum_{i=1}^{K} b_i\bar{x}_i$
19.	Coefficients: estimate of β_j	$b_j=\sum_{j=i}^{N} y_j\left[C_{il}(x_{ij}-\bar{x}_1)+\ldots+C_{ik}(x_{kj}-\bar{x}_K)\right]$
20.	Fitted Y value (predicted value).	$Y_j=b_o+b_1x_{ij}+\ldots+b_kx_{kj}$
21.	Residuals (deviation from predicted value).	Y_j-Y_j
22.	Total sum of squares.	$TSS=\sum_{j-1}^{N}(Y_i-\bar{y})^2$
23.	Sum of squares due to fitted equation.	$SSFE=\sum_{j=1}^{N}(Y_i-\bar{y})^2$
24.	Residual sum of squares.	$RSS=\sum_{j=1}^{N}(Y_i-Y_j)^2$
25.	Residual degrees of freedom.	N-K-1
26.	Residual Mean Square (standard error of estimate).	$S^2(y)=\frac{RSS}{N-K-1}$
27.	Residual Root Mean Square.	S(y)
28.	Standard error of coefficient.	$S(b_i)=S(y)(C_{ii})^{\frac{1}{2}}$
29.	T-Value.	$t_i=\frac{b_i}{S(b_i)}$
30.	Relative influence of each independent variable.	$\frac{b_iw_i}{W_y}$

TABLE 1 (Continued)

Notation And Formulas For The "GLOBAL" Statistics,

31. Multiple correlation coefficient squared (coefficient of determination).

$$R_y^2 = \frac{SSFE}{TSS}$$

32. F-Value

$$\frac{N-K-1}{K} \frac{SSFE}{RSS}$$

33. Simple "linear" correlation coefficient.

$$r_{12} = \left(\frac{\sum_{j=1}^{N} (x_{1i} - \bar{x}_1)(x_{2i} - \bar{x}_2)}{\sum_{j=1}^{N} (x_{1i} - \bar{x}_1)^2 \sum_{j=1}^{N} (x_{1i} - \bar{x}_2)^2} \right)^{\frac{1}{2}}$$

34. Squared multiple "linear" correlation coefficient.

$$R_i^2$$

35. D-Statistic.

$$d_i = \frac{\sum_{j-1}^{N} x_{ij}^2 (x_{ij} - \bar{x}_i)}{2 \sum_{j=1}^{N} (x_{ij} - \bar{x}_i)^2}$$

36. Cp-statistic.

$$C_p = \frac{RSS}{s^2(y)} - N + 2(k+1)$$

"interior" statistics in Table 2 (see [1]) can assist in such things as detecting outliers; indicating observations which may influence the form of the equation (possibly introducing curvature); detecting those observations which have the largest effect on the assumed equation, finding those observations which are taken approximately under the same x_i-conditions (called nearby neighbors) and in testing the validity of the "global" statistics. These nearby neighbors are used to obtain a less biased estimate of our error of prediction, $\sigma^2(y)$. The interior statistics defined are weighted by the b_i - values so as to reduce the effects of uninfluential factors.

STATISTICAL PRINTOUTS AND TABLES

The statistics ("global" and "interior") constitute a major portion of the results used to evaluate a multiple regression equation, but by no means do the statistics give the "total picture". There are statistical printouts and tables, statistical plots and statistical techniques, which must also be considered with the statistics to get a view of the "total picture" and to adequately evaluate the results. A printout of the statistics generated by the LLSCFP for the estimating relationship developed for the support parameter Mean Time Between Maintenance Actions (MTBMA), where ln (MTBMA) is the dependent variable, is shown on pages 65 through 73, Appendix B. Appendix B contains the results of the estimating relationships developed for each variable considered in this study and will be further elaborated on in section IV. Page 65 displays many of the preliminary statistics including the sums, residual sum of squares and cross products, means and root mean squares of the variables (independent and dependent), the simple correlation coefficients and the elements of the inverse matrix. Page 65 shows many other "global" statistics including the coefficients (b_i), the standard error of the coefficients ($s(b_i)$), the t-values (t_i), R_i^2, the minimum, maximum, range and relative influence of each independent variable x_i. In addition the number of observations (N), the number of independent variables (κ), the residual degrees of freedom ($N-\kappa-1$), the F-value, residual mean square (RMS) and the multiple correlation coefficient squared (R_y^2) are displayed.

TABLE 2

Notation And Formulas For The "Interior" Statistics

1.	Weighted squared standardized distance.	$\text{WSS DISTANCE} = \sum_{i=1}^{K} b_i (x_{ij} \bar{x}_i)^2$
2.	Component effects	$C_{ij} = b_i (x_{ij} - \bar{x}_i)$
3.	WSSD	$\text{WSSD}_{jj'} = \frac{1}{2} \sum_{S(y)}^{K} \sum_{i=1} (C_{ij} - C_{ij'})^2$
4.	Cumulative standard deviation estimated from near neighbors.	$S_n = \frac{.886 \sum \Delta_n d}{n}$

"Component Effects" Table

The "interior" statistic, component effect, C_{ij}, of each variable on each observation is printed in tabular form on pages 66 to 79 where the variables are ordered by their decreasing relative influences in columns, and the observations are ordered by their decreasing effects on the most influential variables in rows. Here the analyst can see which particular observations are most influential in their effects on the fitted equation. In addition this table can be used to determine the importance of high correlation among the independent variables.

Standard Deviation Estimated From Residuals of Neighboring Observations

The cumulative estimates, S_n, of the standard deviation are printed in the second column of pages 70 and 71. The WSSDjj, observations in columns 4 and 5 are printed in the third column. Also the observations are ordered by their increasing fitted y values. At the top of page 70 is the residual root mean square = .48. The cumulative standard deviation column indicates that the standard deviation estimated from near neighbors is approximately .49, which indicates that there is no evidence of lack of fit.

Observations Ordered by Computer Input and by Residuals

As shown on page 72 under the heading "ORDERED BY COMPUTER INPUT," the residuals are listed in the order in which the observations were given to the computer. *The Work Unit Code* (WUC) of each piece of equipment is given in the first column for identification purposes. The third column shows the WSS DISTANCE for each observation. Here those observations far from the centroid of all observations can be easily spotted (observation 18 and 77). Under the heading "ORDERED BY RESIDUALS," the residuals are listed in the order of the magnitude of the residuals. This gives an indication of which observations are fitted the best (or worst). As can be seen, observation 46 is fitted best and 50 is fitted worst.

STATISTICAL PLOTS

As with any endeavor dealing with Deductive Reasoning, the conclusions are dependent on the validity of the assumptions. Thus the analyst must have some means of verifying the degree to which the assumptions are satisfied. In addition to the number of statistics and statistical tables, there are five types of computerized plots that can be used to determine how close the data and fitted equations satisfy the assumptions of the method of least-squares. These plots give the analyst much insight into the fit that the statistics alone cannot. The plots are used to determine (1) whether the assumptions of the method of least-squares are "nearly" satisfied, (2) just how well (or bad) the equation fits the data, and (3) to obtain further insights

into the distributional properties of the data and how these properties affect the fit.

Cumulative Distribution of Residuals

When k independent variables are fitted to data with normally distributed error (Assumption A4), it can be shown that the residuals also have a normal distribution. Therefore, the graph of the residual versus cumulative frequency should be "nearly" a straight line. Page 74 (Appendix B) is the cumulative frequency plot for the fitted equation developed, with ln (MTBMA) as the dependent variable. There is no indication here of deficiencies in the fit.

Residuals vs Fitted Y

The plot of the residuals versus the fitted values of the dependent variable is also helpful in checking Assumption A1, A2 and A4. This plot may show whether there is some dependence of the magnitude of the residuals on the magnitude of the fitted values. Daniel and Wood [1], gives four common defects that may be revealed by such plots. Recall Assumption A3 states that the variance of the error is constant. The plot of residual versus fitted Y should then show an equal scatter about the 0-residual line. The two plots, cumulative frequency plot and the plot of the residulas vs. fitted Y, can be used together to determine whether an observation is an outlier (impossible value). However, if the observation is at the extreme ends of the ranges of the dependent variable, curvature may be needed in the relationship. On page 75 there is a plot of the residual versus fitted Y for the equation developed for MTBMA. The equal scatter of the residuals about the 0-residual line does not indicate deficienies in the equation developed.

Residuals vs Independent Variable X(I)

The pattern of the residuals in the plot residuals versus independent variable x_i is useful in determining whether other functional forms of the independent variables are needed. The residuals should be equally scattered about the 0-residual line. As an actual example, Figure 1 is a plot of the residuals versus an independent variable x_1 where obviously a squared term is needed in the equation. This plot was obtained when a fit

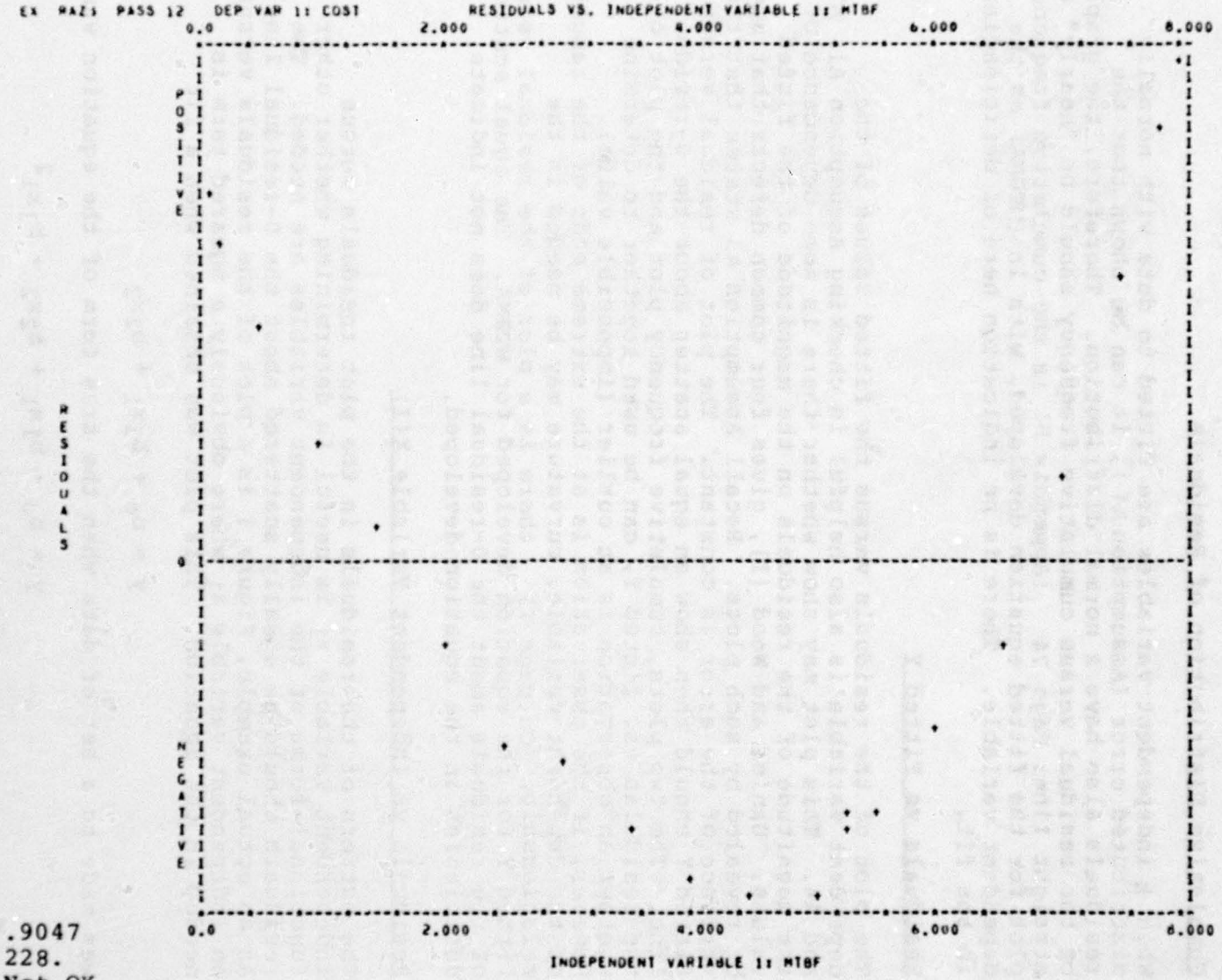
$$y = b_o + b_1x_1 + b_2x_2$$

was made to a set of data when the true form of the equation was

$$y = b_o + b_1x_1 + b_2x_2 + b_1x_1^2$$

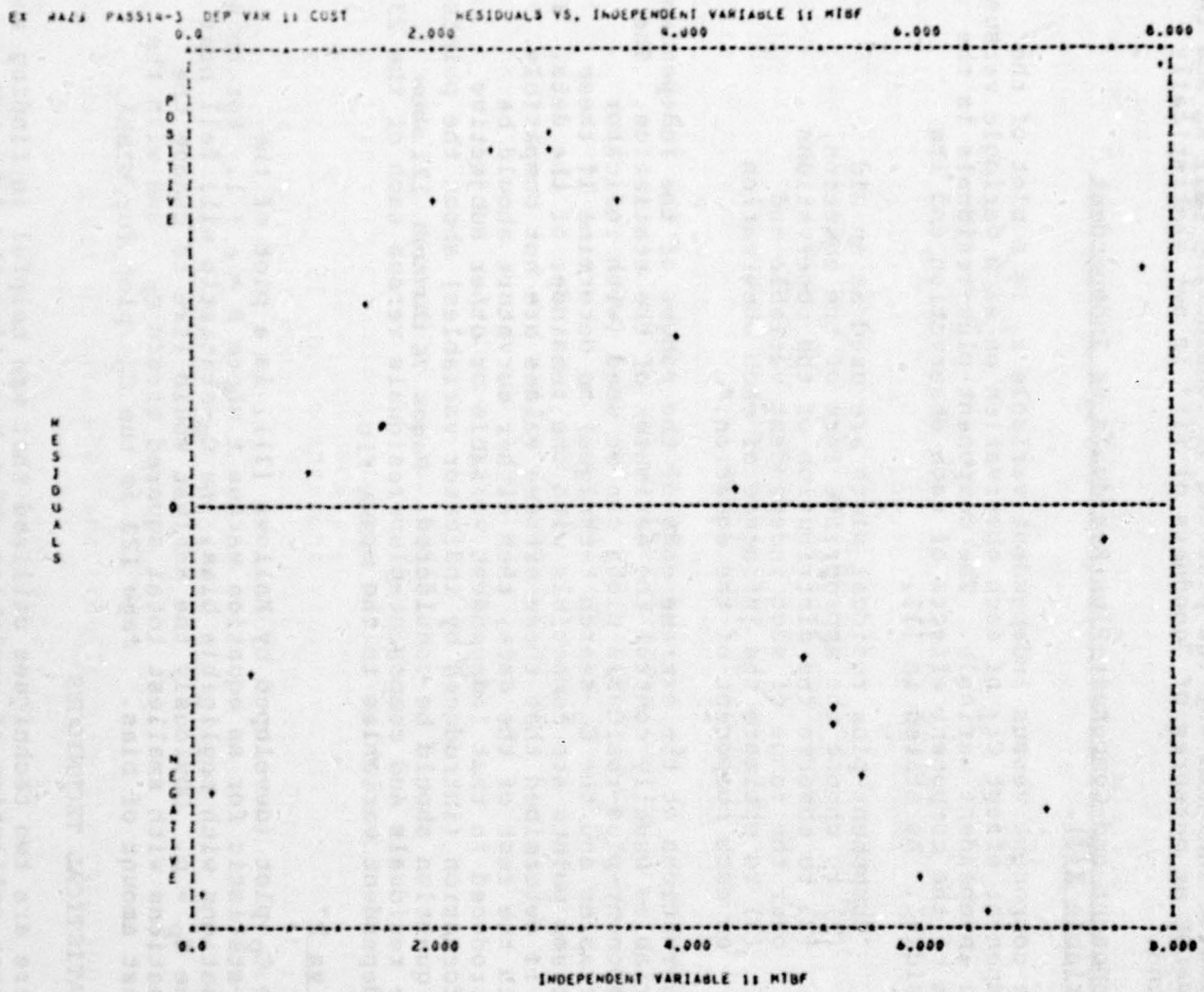
For this fit however the "global" statistics were significant and did not indicate anything wrong with the fitted equation. In particular $R_y^2 = .9047$ and the F-VALUE = 228. Figure 2 is another example plot where the equation

FIGURE 1



Ry^2 = .9047
F-value = 228.
Plot = Not OK

FIGURE 2



Ry^2 = .9963
F-value = 3267
Plot = Not OK

$$y = b_o + b_1x_1 + b_2x_2^2 + b_3x_1^3$$

was fitted to data and the true form was

$$y = b_o + b_1x_1 + b_2x_2^2 + b_3x_1^4$$

Here, $R_y^2 = .9963$ and the F-VALUE = 3267. These two simple examples indicate why the practice of considering only R_y^2 and the F-VALUE as measures of "goodness of fit" is not statistically sound.

Component and Component-Plus-Residuals vs Independent Variable X(I)

The component versus independent variable x_i is a plot of the component effect C_{ij} of each observation on each variable versus the independent variable. The component-plus-residuals is the sum of the component effects of each observation and its residual. As stated in [1],

> "Component-plus residual plots are used as an aid (1) to choose the appropriate form of the equation, (2) to observe the distribution of the observations over the range of each independent variable and (3) to estimate the influence of each observation on each component of the equation."

Observations at the extreme ends of the ranges of the independent variables usually control the estimates of the statistics. The component-plus-residuals plots can be used (with indicator variables and the C_p-search technique) to determine if these extreme points are compatible with the remainder of the data. If it is determined that these extreme values are not compatible with the rest of the data, then either curvature should be introduced in that independent variable or other subjective information (introduced by indicator variables) about the points in question should be considered. Pages 76 through 121 show the residuals and component-plus-residuals versus each of the 23 independent variables in the MTBMA fit.

CP vs P

The C_p-plot (developed by Mallows [3]), is a plot of the C_p-statistic for an equation versus P where $P = \kappa + 1$. For those equations with negligible bias, the C_p-statistic will fall near line $C_p = p$. Obviously the analyst would like to choose the equations with smallest total squared errors C_p and with the least amount of bias. Page 123 is the C_p- plot for MTBMA.

STATISTICAL TECHNIQUES

There are two techniques utilized that are helpful in finding the subset collection of variables which best fits the data and in determining the stability of the equations obtained.

CP-Search Technique

Two approaches that have been widely used to search the 2^K possible equations for the "best" combination of variables are called "Stepwise Regression (forward and backward)" and the "F-test." Forward stepwise regression introduces the independent variables, one at a time, into the equation and uses a criterion involving the t_i values to determine whether or not x_i should be left in the equation. Backward stepwise regression begins with the complete initial set of variables and drops the variables by using a similar criterion as that of forward stepwise regression. The F-test is widely used to determine the significance of adding an independent variable. Obviously, these two techniques do not search all the 2^K possible equations, but only a portion of them. Moreover, a search with these techniques can lead to different results when the independent variables are correlated or if the variables are introduced in different orders.

With the equation form assumed, there is usually some smaller subset of these variables which have "very" influential effects on the dependent. This subset can be called the Basic Set of Variables. A search proposed by Daniel and Wood [1] called the $t_{K,i}$ - directed search is used to determine a Basic Set. With the Basic Set always included, a technique called the C_p-search technique is used to search up to $2^{18} = 262,144$ equations for the best combination of variables which gives the smallest C_p-statistics, and hence smallest total squared error. In some cases (e.g., when the wrong form of the equation is used) there is no Basic Set of Variables, and here the analyst has the option of choosing a basic set (usually those variables with the largest t_i - values) until there are at most 18 variables remaining to be searched by the C_p-search technique. This method is called Fractional Replication (see [1]). The C_p-search technique using both types of searches have consistently helped to narrow down the initial set.

Cross Verification of Coefficients with a Second Sample of Data

Once a presumably final equation is obtained, the analyst must determine the stability of the obtained equations coefficients. There may be a few observations in the data base (such as those with large WSS DISTANCE and large residuals) that are not compatible with the rest of the data and may be controlling the estimates of the fitted coefficients. A way to determine stability is to drop those observations, run another regression and determine the effects on the least-squares estimates of the coefficients. This technique is called cross verification of coefficients with a second sample of data and provides a rigorous test of the data, the model and the fitted coefficients. As shown in Section V, cross verification of coefficients with a second sample of data can also be used, under limited circumstances, to attempt demonstration of the predictive validity of the relationships developed. Component-plus-residual plots of the second sample of data (where residuals are calculated using the initial coefficients) may point out those observations which may indicate that other forms of curvature are needed.

SECTION III

THE "DESIGN OF THE EXPERIMENT"

The approach to the development of the relationships used in ALPOS was to identify candidate observations called Line Replaceable Units (LRUs), to collect data on physical, logistics and cost parameters (variables) of these LRUs, to fit equations to the data via the techniques of multiple regression analyses, and to use the results of the regressions to contruct the model. The data (a year's worth of data) is displayed in Appendix A and was extracted from a number of sources including existing Air Force Data Systems (AFM 66-1, Increased Reliability of Operational Systems (IROS) and Visibility and Management of Operations and Support Costs (VAMOSC)), site visits and contacts with various Air Force agencies, and Westinghouse activities, published reports and engineering analyses. There are 128 pieces of avionics equipment (observation) on which the study is based where each observation can be identified by its observation number and Work Unit Code (WUC). Also associated with each observation is a total of 29 variables, of which 19 are independent variables and 10 are dependent variables. It should be noted that the variable NRTS is used as a dependent variable in one fit and is also used as an independent variable in those fits in which NRTS is expected to have a significant impact (eg. the logistics support cost in the field).

The independent variables are of two types, quantitative and qualitative. The usual types of variables in a regression exercise are quantitative (i.e., variables that may take on values over a given range) such as weight or other physical characteristics of the equipment. Many times additional (qualitative) information is available, such as certain characteristics of the equipment or a certain class in which the equipment belongs, which should not be discarded, but should be introduced into the regression. "Indicator" variables (variables which take on the value of 0 or 1) are used to introduce qualitative information into the regressions. A "1" indicates that the observation is in a certain class and a "0" indicates that it is not.

The type of aircraft in which a piece of equipment is used and the equipment avionics areas are the two qualitative classes used in this study. There are three types of aircraft: Fighters, Bombers and Cargo, and three areas of avionics: Navigation, Sensory, and Communications. Table 3 shows the observation numbers of each piece of equipment and the class to which it belongs. For instance, observation 69 is a piece of communications equipment that is used in a fighter. Since there is no sensory equipment used in cargo type aircraft, no observations are present there. The numbers in parenthesis indicates the quantity of observations in each category. Thus 29 LRUs are used in bombers and 35 LRUs are sensory type equipment. The numbers in the corners of the inner rectangles indicate the

TABLE 3

Qualitative Categories

	FIGHTERS (70)	BOMBERS (29)	CARGO (29)
NAVIGATION (66)	1 8 15 22 29 2 9 16 23 30 3 10 17 24 31 4 11 18 25 32 5 12 19 26 33 6 13 20 27 34 7 14 21 28 **34**	71 78 72 79 73 80 74 81 75 82 76 83 77 84 **14**	100 107 114 101 108 115 102 109 116 103 110 117 104 111 105 112 106 113 **18**
SENSORY (35)	35 42 49 56 63 36 43 50 57 37 44 51 58 38 45 52 59 39 46 53 60 40 47 54 61 41 48 55 62 **29**	85 86 87 88 89 90 **6**	**0**
COMMUNICATIONS (27)	64 65 66 67 68 69 70 **7**	91 98 92 99 93 94 95 96 97 **9**	118 125 119 126 120 127 121 128 122 123 124 **11**

number of observations which fall in the respective interactive classes. There are 34 observations which are used in fighters in addition to being navigations equipment.

Table 4 lists the names of all the variables and their associated variable names used in the computer printouts of the regressions. Also listed are the units in which the variables are expressed. FIG, BOM and CAR are indicator variables used to represent the three types of aircraft, fighters, bombers and cargo, respectively. NAV, SEN and COM are used to represent the three areas of avionics ; navigation, sensory and communications, respectively.

TABLE 4

VARIABLES USED IN THE REGRESSIONS

INDEPENDENT VARIABLES

INDICATOR	QUANTITATIVE
FIGSEN = FIG * SEN	UP = Unit price
FIGCOM = FIG * COM	VO = Volume
BOMNAV = BOM * NAV	WT = Weight
BOMSEN = BOM * SEN	CC = Components count
BOMCOM = BOM * COM	CD = Components density
CARNAV = CAR * NAV	DI = % Digital
CARCOM = CAR * COM	EM = % Electro-mechanical
	PS = % Power supply
	XT = % Transmitter
	SS = % Solid state
	PD = Power dissipation
	UF = Utilization factor

DEPENDENT VARIABLES

MTBF = Mean (operating) Time Between Failure
MTBMA = Mean (operating) Time Between Maintenance Actions
MHTOT = Maintenance Manhours (total) per Operating Hour
MHUNS = Maintenance Manhours (unscheduled) per Operating Hour
MHSHO = Maintenance Manhours (shop) per Operating Hour
LSCTO = Logistics Support Costs (total) per Operating Hour
LSCFD = Logistics Support Costs (field) per Operating Hour
NRTS = Fraction Not Repairable This Station
SRA = Depot Special Repair Activity Cost per unit
TRAIN = Training Cost per Operating Hour

Since interactions proved to be significant in all relationships in Phase I, the interactive classes were used as the indicator variables for Phase II regressions where FIGNAV (not in the regression) is the interactive baseline.

There are three lines of information associated with each observation in Appendix A. The first line lists the 7 indicator variables, the second the (quantitative) independent variables, and the third lines list the 10 dependent variables. For instance, observation 5 with WUC 71PBO is a piece of navigation equipment that is used in a fighter with an adjusted unit price of $2241, weight = 36.5 lbs., volume = 1276 in^3, power dissipation = 289 watts, MTBMA = 476 hours, and SRA = $470.

Initially 128 LRUs were considered for the study. Many of the observations were dropped from the analysis because of the lack of data or the difficulty in obtaining the necessary data. Other observations, such as equipment which had not been in the Air Force inventory long enough to experience "good" data, were discarded so as not to introduce bias in the results. In addition a few of the observations had missing dependent variable data and were omitted for that particular fit. The observation numbers and WUCs of each piece of equipment used in each fit can be obtained from the tables "ORDERED BY COMPUTER INPUT" in Appendix B.

Many times the statistics, plots, tables and techniques indicate that some observations do not behave like the remainder of the data. Besides other possible subjective variables, curvature may be causing this instability. In addition to the variables shown in Table 4, two transformations of the independent variable (the square and natural logarithm) and a transformation of the dependent variable (natural logarithm) are introduced into the regressions when curvature is indicated. The natural logarithm transformation is considered for those variables whose range is contained in the positive real numbers. Using UP = unit price as an example, the variable names of the transformed independent variables as listed in the computer printouts of the LLSCFP are of the form:

$$MUP = (UP - UP)$$

$$DUP = (UP - dUP)^2$$

$$LUP = \ln (UP)$$

where UP, dUP and ln (UP) indicate the mean, d-statistic, and natural logarithm of the variable unit price (UP), respectively. Table 5 shows the d-statistics and means of each quantitative independent variable used in each of the regressions.

Before beginning any regressions, the data must be critically analyzed for outliers (impossible values) and for what is known

TABLE 5

D-Statistics and Means

MTBF, MTBMA

I	MEAN(I)	DSTAT(I)
8	39612.328	188936.700
9	1281.133	3226.500
10	31.277	65.399
11	1177.548	2974.289
12	1.382	2.375
13	25.202	43.764
14	8.805	45.571
15	5.318	46.583
16	8.425	42.288
17	79.985	53.642
18	324.117	975.063
19	1.729	1.741

MHTOT, MHUMS, MHSHO

I	MEAN(I)	DSTAT(I)
8	41978.670	187496.400
9	1326.513	3244.542
10	32.461	65.584
11	1177.428	2955.745
12	1.224	2.361
13	24.981	44.492
14	10.191	44.829
15	5.989	46.322
16	8.496	42.223
17	78.751	53.939
18	335.467	973.135
19	1.745	1.745

LSCTO, LSCFD

I	MEAN(I)	DSTAT(I)
8	40153.698	190894.700
9	1332.701	3221.613
10	32.351	65.395
11	1195.994	2985.822
12	1.285	2.398
13	23.974	44.198
14	8.359	45.842
15	5.362	45.588
16	8.641	42.272
17	79.326	53.723
18	326.162	979.888
19	1.734	1.745

NRTS

I	MEAN(I)	DSTAT(I)
8	39834.870	195383.700
9	1375.716	3276.146
10	33.197	66.857
11	1191.810	3018.296
12	1.211	2.366
13	24.754	44.752
14	9.694	44.987
15	5.453	45.527
16	8.598	42.493
17	78.469	54.386
18	341.526	986.718
19	1.755	1.738

SRA

I	MEAN(I)	DSTAT(I)
8	37798.538	199034.600
9	1357.731	3278.377
10	33.134	66.721
11	1184.231	2738.397
12	1.288	2.434
13	24.231	43.278
14	7.486	42.698
15	4.319	46.848
16	9.361	42.517
17	79.188	54.491
18	331.284	998.979
19	1.738	1.787

TRAIN

I	MEAN(I)	DSTAT(I)
8	38778.178	192987.900
9	1345.192	3219.841
10	32.763	65.529
11	1190.898	2998.965
12	1.252	2.371
13	24.442	44.382
14	8.570	43.264
15	5.197	45.726
16	8.789	42.957
17	79.438	54.231
18	333.712	974.917
19	1.734	1.752

as "Nested Data". The data is said to be "Nested" if some of the observations have all or nearly all the same or approximate x -values. Obviously outliers would have a significant impact on the fitted coefficients, thereby yielding the incorrect relationships. If the equations are fitted without checking to determine whether or not the data are nested, the wrong factors may be significant. The analysis of "Nested Data" was first introduced into the statistical literature by Daniel and Wood ([1], Chapter 8).

As a means of determining whether the data are "nested", a computer program was written to sort the data table by each independent variable, x_i. For instance, Table 6 is a printout of the data ranked by the weight. As can be seen there are only a few observations with the same x_i values, and hence no evidence of serious nesting exists. Also the components - plus-residual plots can be used to detect nested data. If it is determined that the data are nested, two fittings must be made: one on the nested data "within plots" and one "among plots".

The reader is referred to Volume I of this report to see other factors which define the observations, the definitions of each variable used (independent and dependent) and which data systems were used to obtain the information (raw data) for each variable.

TABLE 6

RANKED BY INDEPENDENT VARIABLE X(10)

OBSER. NO.	X(8)	X(9)	X(10)	X(11)	X(12)	X(13)	X(14)	X(15)	X(16)	X(17)	X(18)	X(19)	X(20)	X(21)	DEP. VAR.
	UPRICE	VOLUME	WEIGHT	CCOUNT	CDENS	DIGTAL	ANALOG	EM	PS	XTMP	SS	PD-DIS	UFACT	BITFIT	MTBMA
98	554.	38.	1.00	38.	1.00	0.00	100.00	0.00	0.00	0.00	100.00	9.	1.30	0.00	3444.
75	158.	34.	1.20	38.	1.27	0.00	100.00	0.00	0.00	0.00	0.00	34.	1.30	4.27	3704.
7	2855.	133.	1.25	84.	0.63	0.00	97.30	3.00	0.00	0.00	97.00	87.	2.30	0.00	3549.
70	2957.	78.	2.00	159.	2.04	88.70	0.30	0.00	11.30	0.00	100.00	3.	2.30	0.00	2686.
16	2514.	78.	2.00	79.	1.01	0.00	100.30	0.00	0.00	0.00	100.00	7.	2.30	0.00	1479.
23	516.	94.	2.00	94.	1.00	0.00	100.00	0.00	0.00	0.00	100.00	10.	2.30	0.00	1237.
117	516.	94.	2.00	94.	1.00	0.00	100.00	0.00	0.00	0.00	100.00	10.	1.20	0.00	4637.
112	7225.	91.	2.10	26.	0.29	0.00	50.00	50.00	0.00	0.00	50.00	7.	1.20	0.00	1133.
74	153.	98.	2.50	78.	0.91	0.00	100.00	0.00	0.00	0.00	0.00	17.	1.30	0.00	580.
50	4727.	119.	3.30	24.	0.20	90.00	0.00	10.00	0.00	0.00	90.00	24.	2.30	0.00	1419.
79	1347.	132.	3.40	128.	0.91	0.00	100.00	0.00	0.00	0.00	86.00	34.	1.30	0.00	649.
99	12302.	68.	4.00	82.	0.91	0.00	75.00	0.00	0.00	25.00	96.20	14.	1.30	0.00	858.
6	848.	91.	4.00	12.	0.13	0.00	100.00	0.00	0.00	0.00	100.00	20.	2.30	1.00	2521.
35	3015.	94.	4.00	108.	1.15	0.00	100.00	0.00	0.00	0.00	100.00	7.	2.30	0.00	1399.
128	833.	146.	4.00	37.	0.25	0.00	100.00	0.00	0.00	0.00	100.00	7.	1.20	0.00	971.
97	12360.	135.	4.17	471.	3.49	0.00	100.00	0.00	0.00	0.00	100.00	70.	1.30	11.00	284.
126	6958.	135.	4.30	471.	3.49	0.00	100.00	0.00	0.00	0.00	100.00	70.	1.20	0.00	326.
22	1534.	154.	5.00	669.	4.34	50.00	50.00	0.00	0.00	0.00	100.00	95.	2.30	0.00	1994.
56	17925.	477.	5.00	917.	1.92	99.10	0.30	0.60	0.00	0.00	99.40	141.	2.30	0.00	695.
110	1534.	154.	5.00	669.	4.34	50.00	50.00	0.00	0.00	0.00	100.00	95.	1.20	0.00	1746.
11	5176.	200.	6.50	150.	0.75	0.00	100.00	0.00	0.00	0.00	100.00	20.	2.30	13.00	2141.
20	9431.	295.	7.00	275.	0.93	47.00	47.00	6.00	0.00	0.00	100.00	25.	3.10	5.60	189.
81	2879.	275.	7.30	298.	1.05	0.00	100.00	0.00	0.00	0.00	100.00	6.	1.30	0.00	1216.
108	1268.	294.	7.50	214.	0.73	0.00	100.00	0.00	0.00	0.00	100.00	20.	1.20	4.00	1387.
71	1100.	264.	7.50	214.	0.76	0.00	93.00	7.00	0.00	0.00	93.00	7.	1.30	4.00	1000.
45	24642.	397.	8.00	529.	1.72	0.00	98.00	2.00	0.00	0.00	98.60	382.	0.83	0.00	995.
88	835.	222.	8.50	9.	0.04	0.00	0.00	100.00	0.00	0.00	0.00	100.	1.30	0.00	6878.
86	835.	222.	8.50	9.	0.04	0.00	0.00	100.00	0.00	0.00	0.00	100.	1.30	0.00	7530.
111	2165.	358.	9.00	88.	0.24	0.00	33.00	67.00	0.00	0.00	0.00	860.	1.20	0.00	1496.
122	6345.	242.	9.00	1615.	6.67	44.00	37.00	0.00	0.00	19.00	100.00	35.	1.20	0.00	293.
76	2782.	255.	10.50	29.	0.07	0.00	0.00	100.00	0.00	0.00	0.00	100.	1.30	0.00	1791.
38	8267.	577.	11.00	35.	0.06	0.00	0.00	100.00	0.00	0.00	0.00	430.	2.30	5.00	1765.
80	2598.	464.	11.50	177.	0.38	0.00	100.00	0.00	0.00	0.00	37.00	132.	1.30	0.00	113.
14	15699.	694.	11.80	1443.	2.37	94.40	0.00	1.00	4.60	0.00	100.00	206.	2.30	0.00	835.
15	38015.	698.	11.80	1142.	1.88	100.00	0.00	0.00	0.00	0.00	100.00	191.	2.30	44.00	869.
89	1995.	267.	12.00	742.	2.78	53.10	7.60	0.00	39.30	0.00	100.00	34.	2.30	0.00	179.
46	43912.	999.	12.00	53.	0.06	0.00	0.00	100.00	0.00	0.00	0.00	60.	0.83	0.00	914.
104	6247.	470.	12.00	1213.	2.11	0.00	99.00	1.00	0.00	0.00	99.00	175.	1.20	0.00	289.
95	32591.	378.	13.12	195.	0.52	0.00	75.00	0.00	0.00	25.00	100.00	152.	1.30	0.00	216.
125	24205.	389.	13.20	195.	0.50	0.00	75.00	0.00	0.00	25.00	100.00	150.	1.20	0.50	247.
9	17232.	142.	13.90	412.	2.90	49.00	49.00	2.00	0.00	0.00	98.00	344.	2.30	19.00	915.
18	11988.	424.	13.90	61.	0.14	0.00	33.00	67.00	0.00	0.00	33.00	175.	2.30	17.00	577.
110	1602.	399.	14.00	328.	0.82	0.00	0.00	0.00	100.00	0.00	30.00	860.	1.20	0.00	272.
67	14271.	377.	14.00	982.	2.60	0.00	75.00	0.00	0.00	25.00	100.00	84.	2.30	0.00	317.
8	23327.	584.	14.00	421.	0.72	0.00	89.00	11.00	0.00	0.00	34.00	172.	2.30	13.00	94.
39	2852.	560.	15.00	911.	1.63	0.00	100.00	0.00	0.00	0.00	100.00	335.	2.30	0.00	382.
127	3175.	554.	15.90	1116.	1.96	0.00	75.00	0.00	0.00	25.00	100.00	263.	1.20	0.00	798.
53	38999.	592.	16.00	1756.	2.54	82.20	17.50	0.00	0.30	0.00	100.00	138.	2.30	0.00	444.
90	19291.	622.	16.00	3241.	5.21	0.00	98.00	1.00	0.00	0.00	98.00	200.	1.30	19.50	113.
13	15848.	642.	16.30	1931.	1.61	87.00	7.50	0.00	5.50	0.00	100.00	191.	2.30	29.00	439.
88	7579.	498.	16.30	585.	1.37	59.10	38.00	2.70	0.00	0.00	97.30	32.	2.30	0.00	552.
34	2507.	632.	16.40	3164.	5.09	0.00	100.00	0.00	0.00	0.00	100.00	100.	2.30	3.00	117.

TABLE 6

RANKED BY INDEPENDENT VARIABLE X(10), Continued

1	13721.	443.	17.79	419.	0.93	0.00	88.00	14.00	0.00	0.00	86.00	200.	2.34	0.20	143.
47	2078.	760.	18.00	1388.	1.72	95.90	0.00	1.30	2.40	0.00	98.70	122.	2.30	0.00	598.
32	38633.	713.	18.50	648.	0.91	0.00	0.00	8.20	91.80	0.00	91.80	9.	2.30	0.20	451.
38	88764.	1048.	18.50	994.	0.95	90.20	10.00	0.00	0.00	0.00	100.00	60.	2.30	0.00	179.
58	37137.	950.	19.00	1779.	1.87	81.50	11.00	7.70	6.00	0.00	99.30	135.	2.34	0.00	343.
29	195551.	859.	20.00	602.	0.91	0.00	80.70	0.00	20.00	0.00	100.00	120.	2.32	1.20	119.
19	25839.	1906.	21.00	1824.	0.96	68.50	0.00	0.00	4.70	0.00	100.00	1900.	2.32	0.00	713.
18	29570.	8933.	21.50	269.	0.03	0.00	63.40	0.00	36.50	0.00	98.70	75.	2.30	54.20	262.
90	14626.	598.	23.13	432.	0.72	0.00	43.40	32.00	24.20	0.00	100.00	150.	1.30	0.00	294.
44	19274.	551.	25.00	1319.	2.39	100.00	0.00	0.00	0.00	0.00	100.00	1300.	2.34	0.00	161.
46	125493.	1173.	25.70	985.	0.84	0.00	100.00	0.00	0.00	0.00	100.00	300.	2.30	53.20	237.
27	121411.	1927.	26.00	3027.	2.05	41.70	39.00	0.00	19.30	0.00	100.00	120.	2.30	2.20	76.
114	27391.	1907.	26.00	1289.	1.18	79.20	30.00	0.00	0.00	0.00	100.00	80.	1.20	0.00	272.
83	121411.	1927.	26.00	3027.	2.05	41.70	39.00	19.30	0.00	0.00	100.00	120.	1.30	2.20	32.
87	31698.	1223.	26.40	1457.	1.19	0.00	100.00	0.00	0.00	0.00	100.00	145.	1.30	0.00	837.
115	8027.	748.	26.50	2060.	2.75	75.00	0.00	0.00	0.00	25.00	99.00	180.	1.20	0.00	1085.
21	8027.	748.	26.50	2060.	2.75	75.00	0.00	0.00	0.00	25.00	99.00	180.	2.30	16.00	492.
33	5384.	826.	27.00	272.	0.33	0.00	97.20	2.80	0.00	0.00	95.80	920.	2.30	2.80	299.
31	12764.	2785.	27.90	846.	0.30	0.00	100.00	0.00	0.00	0.00	98.50	200.	2.30	0.00	74.
49	32077.	1793.	28.20	1875.	0.82	0.00	91.30	8.70	0.00	0.00	91.30	123.	2.30	78.00	485.
118	3914.	1844.	29.00	1236.	0.67	0.00	75.00	1.00	8.00	15.00	97.50	90.	1.20	5.00	190.
88	12956.	1120.	29.00	790.	0.71	0.00	75.00	0.00	0.00	25.00	95.00	150.	2.30	0.00	154.
93	3914.	1844.	29.00	1236.	0.67	0.00	75.00	1.00	8.00	15.00	97.50	90.	1.30	5.70	252.
12	30145.	866.	29.60	32.	0.04	0.00	75.00	0.00	0.00	25.00	95.00	70.	2.30	18.20	427.
3	36913.	1676.	30.60	78.	0.05	0.00	24.00	76.00	0.00	0.00	24.00	820.	2.30	0.20	120.
107	16795.	432.	31.00	592.	1.37	0.00	90.00	1.00	9.00	0.00	99.00	851.	1.20	4.00	284.
105	34862.	1250.	32.00	2743.	2.18	55.00	33.00	0.00	0.00	12.00	90.60	265.	1.20	0.00	161.
59	31518.	952.	32.00	1961.	1.11	0.20	0.00	0.00	100.00	0.00	100.00	455.	1.20	0.00	175.
63	49633.	1445.	33.30	787.	0.49	20.00	66.60	13.40	0.00	0.00	86.10	145.	1.20	0.00	95.
43	42923.	1856.	35.00	932.	0.50	0.00	0.00	0.00	100.00	0.00	100.00	1600.	2.30	65.00	177.
65	7191.	1307.	36.00	1674.	1.22	0.00	75.00	0.00	0.00	25.00	97.60	256.	2.30	0.00	120.
64	7191.	1307.	36.00	1674.	1.22	0.00	75.00	0.00	0.00	25.00	97.60	256.	2.30	0.00	78.
84	31654.	1922.	36.00	2982.	2.34	0.00	100.00	0.00	0.00	0.00	99.10	299.	1.30	0.00	44.
5	2241.	1278.	36.50	758.	0.59	0.00	85.00	14.00	0.00	0.00	86.00	280.	2.30	0.00	476.
52	35937.	2925.	38.00	522.	0.20	0.00	93.00	0.00	6.10	0.00	99.70	177.	2.34	36.00	193.
124	183000.	1549.	38.00	725.	0.47	75.40	0.00	0.00	24.60	0.00	100.00	300.	1.20	15.00	86.
54	19967.	1458.	38.00	2242.	1.53	85.60	13.00	1.20	0.00	0.00	98.60	517.	2.30	0.00	614.
106	180400.	1511.	39.55	1044.	0.69	87.00	12.00	1.00	0.00	0.00	98.70	850.	1.20	0.00	127.
4	8410.	1473.	40.00	889.	0.47	0.00	74.00	1.00	0.00	25.00	95.80	77.	2.30	0.00	133.
17	192215.	1799.	40.00	3193.	1.87	45.70	7.10	1.50	5.70	0.00	98.50	240.	2.30	41.00	166.
25	215332.	1495.	40.00	5016.	4.02	80.00	20.00	0.00	0.00	0.00	100.00	460.	2.30	1.00	51.
2	6881.	1444.	40.00	491.	0.34	0.00	75.00	0.00	0.00	25.00	97.00	210.	2.30	0.00	161.
123	38849.	1582.	40.00	381.	0.23	68.70	11.00	0.00	19.40	0.00	100.00	200.	1.20	44.00	159.
120	18712.	1129.	41.00	790.	0.71	0.00	75.00	0.00	0.00	25.00	97.00	150.	1.20	0.00	139.
41	220943.	2278.	41.00	7638.	3.35	100.00	0.00	0.00	0.00	0.00	100.00	1800.	2.34	51.00	198.
34	18120.	1609.	43.70	1126.	0.70	0.00	61.00	39.00	0.00	0.00	61.00	900.	2.30	0.00	127.
53	22770.	1470.	44.00	819.	0.55	98.90	0.00	1.10	0.00	0.00	98.90	181.	2.30	0.00	674.
85	9731.	1760.	45.00	946.	0.54	11.00	84.00	5.00	0.00	0.00	94.70	350.	1.30	0.00	346.
28	82593.	1188.	46.00	433.	0.37	0.00	20.00	80.00	0.00	0.00	20.00	287.	2.30	1.00	74.
24	85928.	1573.	47.40	3372.	2.11	93.00	7.00	0.00	0.00	0.00	100.00	225.	2.34	1.00	41.
82	87249.	1573.	47.40	3322.	2.11	93.00	7.00	0.00	0.00	0.00	100.00	225.	1.30	0.00	84.
121	3846.	1582.	49.00	1153.	0.69	0.00	75.00	0.00	0.00	25.00	93.00	590.	1.20	0.00	119.
91	3846.	1582.	49.00	1153.	0.69	0.00	75.00	0.00	0.00	25.00	93.00	590.	1.30	0.00	81.
94	5954.	1969.	49.00	1378.	0.74	0.00	100.00	0.00	0.00	0.00	70.00	380.	1.34	0.00	173.
92	3846.	1582.	49.00	1153.	0.69	0.00	75.00	0.00	0.00	25.00	93.00	590.	1.30	0.00	78.
62	264550.	7352.	51.00	2452.	1.24	88.20	11.80	0.00	0.00	0.00	100.00	275.	1.20	0.00	169.
60	586510.	1800.	51.00	3248.	1.71	90.00	10.00	0.00	0.00	0.00	100.00	500.	1.20	0.00	36.
119	4833.	1482.	51.00	1186.	0.71	0.00	75.00	0.00	0.00	25.00	93.00	592.	1.20	0.00	55.
97	22595.	2781.	54.00	4199.	1.55	99.80	0.00	0.20	0.00	0.00	99.80	124.	3.10	26.00	112.
113	82945.	2267.	58.00	4275.	1.89	100.00	0.00	0.00	0.00	0.00	100.00	333.	1.20	0.00	58.

TABLE 6

RANKED BY INDEPENDENT VARIABLE X(10), Continued

78	5728.	3444.	58.00	156.	0.05	0.00	43.00	57.00	0.00	0.00	0.00	225.	1.30	0.00	233.
72	2744.	1732.	60.00	924.	0.53	0.00	100.00	0.00	0.00	0.00	0.00	17.	1.30	0.00	98.
109	2745.	1734.	60.00	924.	0.53	0.00	75.00	0.00	0.00	25.00	0.00	599.	1.20	0.00	104.
106	3265.	1734.	60.00	924.	0.53	0.00	75.00	0.00	0.00	25.00	0.00	584.	1.20	0.00	78.
102	2951.	4243.	63.38	4363.	1.03	0.00	100.00	0.00	0.00	0.00	0.00	199.	1.20	0.00	339.
26	344533.	3178.	70.00	2654.	0.84	26.10	59.00	14.10	0.00	0.00	85.50	1582.	2.32	0.00	74.
103	253388.	2473.	75.00	4595.	1.82	32.00	69.00	1.00	0.00	0.00	99.60	787.	1.20	4.00	72.
37	15259.	1377.	78.50	399.	0.29	0.00	0.00	0.00	0.00	100.00	98.00	948.	2.32	1.00	117.
101	3780.	6478.	87.50	321.	0.05	0.00	75.00	0.00	0.00	25.00	25.00	1648.	1.20	0.00	133.
73	5928.	6478.	90.00	321.	0.05	0.00	75.00	0.00	0.00	25.00	25.00	1648.	1.30	0.00	121.
89	42000.	2655.	92.00	2375.	0.89	0.00	0.00	0.00	0.00	100.00	98.00	1300.	0.30	11.70	89.
44	142664.	3656.	110.00	18.	0.00	0.00	0.00	100.00	0.00	0.00	0.00	402.	2.32	42.00	251.
77	18720.	8200.	110.00	361.	0.06	0.00	75.00	0.00	0.00	25.00	66.50	152.	1.32	0.00	45.
81	139554.	4972.	145.00	726.	0.15	0.00	0.00	0.00	0.00	100.00	100.00	3900.	1.20	0.00	47.
51	120885.	1747.	160.00	8299.	4.75	96.00	3.10	0.00	0.00	0.00	100.00	637.	2.30	66.00	115.
42	156000.	5330.	173.70	1558.	0.29	0.00	0.00	0.00	0.00	100.00	99.00	270.	2.30	61.00	136.

SECTION IV

RESULTS OF THE REGRESSION ANALYSES

After the data was critically examined and alternate LRUs considered where necessary, the multiple regression analyses for each dependent variable (with variations) in Table 4 were performed with the results displayed in Appendix B. Table 7 gives a summary of these results including the run numbers (for identification purposes), the number of independent variables, the number of variables in the Basic Set, the multiple correlation coefficient squared, the F-value, the residual root mean square (standard deviation), the standard deviation estimated from residuals of neighboring observations, the observations with large WSSD, the normal, fitted Y and component-plus-residuals plots. The four parameters MTBF (Run 1), MTBMA (Run 2), MHTOT (Run 3) and LSCTO (Run 6) are major drivers of Operations and Maintenance (O & M) costs and were therefore given more attention. We note that the natural logarithm transformation after much analysis was used for each dependent variable except NRTS. Each equation was approached as the statistics, tables, computerized plots and techniques directed with much emphasis on the "total picture" of the results. This included: (1) the use of the Normal and Fitted values plots to detect outliers, (2) the use of the component-plus-residuals plots to detect those observations which extend the ranges of the independent variables by a "significant" amount and then using indicator variables in conjunction with the C_p-search technique to determine the effects of such extended observations to determine whether the observations behave like the rest of the data (thereby simply extending the ranges of the variables) or whether they are not consistent with the remainder of the data (possibly indicating curvature in the form of squares and natural logarithms), (3) the use of the technique of cross verification of coefficients with a second sample of data to determine if those observations with large (absolute) residuals or large WSS distance are in fact controlling the estimates of the coefficients (possibly indicating curvature) and to determine the stability of the relationships developed and (4) the use of the C_p-search technique to find those subset collections of independent variables which approximate the data with smallest total squared error. Volume II of the Phase I final report (2) gives a sketch of an example indicating how the approaches and techniques were utilized to fit the parameter MTBMA to the Phase I data.

(2) Op. Cit.

TABLE 7

Summary Results of the Regressions

Dependent Variables	Run No.	No. of Independent Variables	# in Basic Set	R_y^2	F-Value	RRMS	Cumulative Standard Deviation	WSSD	Normal Plot	Fitted y Plot	Component Plus Residual Plot
LMTBF	RUN1	23	21	.89	32.1	.48	.48	77,18	ok	ok	ok
LMTBMA	RUN2	23	5	.88	29.3	.48	.49	77,18	ok	ok	ok
LMHTOT	RUN3	20	15	.93	61.9	.42	.43	ok	11,low	11,low	ok
LMHUNS	RUN4	18	7	.90	48.6	.44	.47	ok	35,high	35,high	ok
LMHSHO	RUN5	14	12	.90	66.6	.55	.55	ok	13,high	13,high	ok
LLSCTO	RUN6	18	10	.88	41.0	.59	.59	ok	ok	ok	ok
LLSCFD	RUN7	17	9	.88	42.6	.55	.55	ok	102,low	102,low	ok
NRTS	RUN8	13	1	.66	15.4	10.07	7.52	42,61	44,low	44,low	ok
LSRA	RUN9	14	12	.87	46.3	.48	.47	ok	ok	ok	ok
LTRAIN	RUN10	24	7	.85	22.5	.71	.71	ok	ok	ok	ok
LMHTOT*	RUN11	20	14	.93	62.4	.42	.43	ok	4,32,low	11,32,low	ok
LMHSHO*	RUN12	14	12	.90	69.6	.54	.52	ok	ok	ok	ok
LLSCFD*	RUN13	16	14	.89	50.5	.52	.51	ok	ok	ok	ok
LMHTOT**	RUN14	18	16	.92	66.9	.43	.44	ok	11,low	11,low	ok
LMHUN**	RUN15	17	7	.90	50.7	.44	.49	ok	35,high	35,high	ok

* Uses NRTS as an independent variable.

** Results of C_p search.

As shown in Table 7 all equations (except NRTS) show significant results with no indication of serious lack of fit. The multiple correlation coefficients squared range from .85 (Run 10) to .93 (Run 3 and Run 11) with F-values significant at a .01 level of significance. The residual root mean square (RRMS) and the cumulative estimates of the standard deviation (for instance, .48 versus .49 for Run 9) indicate that there is no evidence of lack of fit. A cross verification of coefficients was performed on those relationships which had observations with large WSSD (Run 1, Run 2, Run 8) where there was no "significant" change in the values of the coefficients. The observations with high and low values in the Normal and Fitted values plots are not extreme as in the case of outliers but have RRMS slightly larger than the remainder of the observations in the data base (see Appendix B). For instance, the MHTOT equation (Run 3) although significant, had one observation, 11, with the largest (negative) residual in each of the intermediate fits, regardless of the functional form considered. Observation 11 with WUC 71CAO is a receiver-transmitter (navigation equipment) used in the F15A. Investigation into the data elements for this LRU did not indicate errors in the collected data. Consequently, observation 11 remained in the data base, since there is not enough known about avionics equipment and the form that the MHTOT equation should be to deem it an outlier. A cross verification of coefficients was performed for those observations with large residuals with slight changes in the values of the coefficients. Thus, the stability of the relationships was attained.

It was anticipated that NRTS could not be estimated well with the independent variables considered in this study since NRTS is highly dependent on many other factors (many subjective) which are not considered. Leaving out influential variables can make other collections of less influential variables appear significant when in fact they are not. Although there is serious lack of fit in the NRTS relationship, 10.07 versus 7.52, the results are still useful, since only large differences in NRTS cause significant changes in the total number of spares estimated by the EBO routine (Volume I). The ALPOS model provides the option for the user to input his own value for NRTS or to use the relationship developed for NRTS when no estimates of NRTS are available. There are also three relationships (Run 11, Run 12, Run 13) which use NRTS as an independent variable. The user can input different values of NRTS over a specific range and sensitize NRTS to determine the impact that changes in NRTS have on the model outputs.

All of these options for NRTS aid in determining the impact that different maintenance philosophies have on avionics equipment costs. The stability of the NRTS relationship was attained and validation results (Section V) indicate to the author that with the data, indicator variables, independent variable, and transformations, considered in the study, the "best" relationship for NRTS was obtained.

Table 8 gives a summary of the independent variables (including transformations) selected via statistical analyses for each relationship developed. Table 9 summarizes Table 8 indicating those independent variables considered of which the dependent variable is a function. Many of the relationships are related and can be compared. For instance, the reciprocal of the MTBF (Run 1) is the inherent reliability failure rate of the equipment. The reciprocal of the MTBMA (Run 2) is the total equipment reliability failure rate of which the MTBF is a significant portion, but it also includes other factors such as manufacturing defects, wearout rate, dependent failure rate, operator-induced failure rate, maintenance induced failure rate and equipment damage rate (3). Both MTBF and MTBMA are dependent on 23 independent variables (Table 8) where in particular they are a function of the same 23 independent variables (Table 9). Table 9 shows that both MTBF and MTBMA are functions of all 20 independent variables considered in this study except FIGSEN, BOMSEN and the components count (CC).

The total maintenance manhours per operating hour (Run 3) is the sum of the scheduled manhours per operating hour (not fitted), the unscheduled manhours per operating hour (Run 4) and the maintenance manhours per operating hour in the shop (Run 5). Tables 8 and 9 show that the MHTOT, MHUNS, and MHSHO are dependent on many of the same independent variables. The total logistics support cost per operating hour (Run 6) is the sum of logistics support cost per operating hour in the field (Run 7), the special repair facility, packing and shipping and condemnation costs (not fitted). Table 9 shows that the LSCTO and LSCFD and functions of the same independent variables where the only difference as shown in Table 8 is that the LSCFD relationship has WT as an independent variable whereas the LSCTO relationship uses MWT and DWT in its place.

As stated previously, three relationships MHTOT (Run 11), MHSHO (Run 12) and LSCFD (Run 13) which "should" be functions of NRTS were fitted to the data with NRTS included as an independent variable and can be compared with their counterparts Run 3, Run 4 and Run 7 respectively which do not consider NRTS. As shown in Appendix B, the two least influential variables of Run 3, XT and MPS were not admitted by the Cp-search technique when NRTS proved to be influential in Run 11. Also several fits (e.g., MHUNS) were made on dependent variables (with NRTS as an independent variable), which should not be a function of NRTS. In those cases, the Cp-search in fact did not accept NRTS as being significant enough to remain in the relationships.

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(3) Logistics Engineering and Management, B. S. Blanchard, Prentice-Hall, Inc., (1974).

TABLE 8

Independent Variables Selected For Each FIT

Independent Variables	RUN NUMBER 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
FIGSEN			*	*					*		*			*	*
FIGCOM	*	*	*	*	*	*	*		*	*	*	*	*	*	*
BOMVAV	*	*	*	*	*	*	*		*	*	*	*	*	*	*
BOMSEN									*	*					
BOMCOM	*	*	*	*	*	*	*				*	*	*	*	*
CARNAV	*	*							*	*					
CARCOM	*	*								*					
UP	*	*													
VO								*		*					
WT							*			*					
CC															
CD	*	*	*			*	*				*		*	*	
DI	*	*		*	*	*	*	*	*	*		*	*		*
EM	*	*				*	*						*		
PS					*							*			
XT			*				*	*					*		
SS			*	*	*	*	*				*	*	*	*	*
PD															
UF								*		*					
MUP								*							
MVO	*	*				*	*			*					
MWT	*	*				*		*							
MCC				*						*	*				*
MCD					*					*		*			
MDI			*								*			*	
MEM			*	*	*			*		*	*	*		*	*
MPS			*							*				*	
MXT								*							
MSS	*	*								*					
MPD				*											*
MUF	*	*													
DUP			*		*				*		*	*		*	
DVO	*	*		*		*	*		*	*					
DWT	*	*				*		*	*						
DCC			*	*		*	*	*	*	*	*		*	*	*
DCD				*	*					*		*			*
DDI			*								*			*	
DEM			*	*	*			*	*	*	*	*		*	*
DPS	*	*	*			*	*		*	*	*		*	*	
DXT	*	*						*							
DSS	*	*								*					
DPD	*	*	*	*							*		*		*
DUP	*	*	*	*	*	*	*				*		*	*	*
LUP	*	*	*	*	*	*	*		*	*	*	*	*	*	*
LVO	*	*	*		*	*	*	*		*	*	*		*	
LWT			*	*				*			*		*	*	*
LCC									*	*					
LPD	*	*		*		*	*			*			*		*
NRTS											*	*	*		

TABLE 9

Independent Variables (without transformations) Needed For Each FIT

Independent Variables	RUN NUMBER 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
FIGSEN			*	*					*		*			*	*
FIGCOM	*	*	*	*	*	*	*		*	*	*	*	*	*	*
BOMNAU	*	*	*	*	*	*	*		*		*	*	*	*	*
BOMSEN									*	*					
BOMCOM	*	*	*	*	*	*	*				*	*	*	*	*
CARNAU	*	*							*	*					
CARCOM	*	*								*					
UP	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
VO	*	*	*	*	*	*	*	*	*	*	*	*		*	
WT	*	*	*	*		*	*	*	*	*	*		*	*	*
CC			*	*		*	*	*	*	*	*		*	*	*
CD	*	*	*	*	*	*	*			*	*	*	*	*	*
DI	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
EM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
PS	*	*	*		*	*	*		*	*	*	*	*	*	
XT	*	*	*			*	*	*					*		
SS	*	*	*	*	*	*	*			*	*	*	*	*	*
PD	*	*	*	*		*	*			*	*		*		*
UP	*	*	*	*	*	*	*	*			*	*	*		
NRTS											*	*	*		

Unfortunately, since the number of relationships considered was large, it was not feasible to include all results ("total picture") for each fit developed. However, all results are in an addendum to this Volume which is retained at the Air Force Avionics Laboratory (AFAL).

SECTION V

RESULTS OF THE VALIDATION INVESTIGATION

The aspects of model validity are discussed in Volume I, including replicative and predictive validity. Replicative validity has been demonstrated by the "goodness of fit" statistics and results in Section IV. The strongest measure of validity, the demonstration of which is wanting in most estimating models (accounting, subjective, regression "crystal ball", etc.), is the condition in which the model is predictively valid, that is, when it can match real system data before the model has "seen" the data. For the ALPOS model, this is, of course, its raison d'etre. In other words, the functional relationships in the model should be able to generate as outputs MTBFs, MTBMAs, manhours, etc., based on inputs of the avionics LRU physical and electrical characteristics, which are "similar" to the MTBFs, MTBMAs, manhours, etc. found in the MDC, IROS and OSCER data system. The key word for this type of validity is similar. Thus, in order to investigate predictive validity, it is necessary to perform some type of data collection and analysis required in establishing the data base for the regressions. That is, for each LRU included in the validation analysis, all of the independent and dependent variables required as input to exercise the estimating relationships must be collected or derived. There are 11 LRUs (Appendix C) with the associated independent and dependent variable data, across aircraft types, avionics areas and levels of complexity, that have been selected for this limited investigation of validity (See Volume I).

Several approaches have been taken with the intent of demonstrating predictive validity for multiple regression analysis models, including running a totally new (validation) data base through the regression relationships obtained via the original data base, prediction intervals, and cross verification of coefficients with a second sample of data. The correct way to attempt demonstrations of predictive validity for regression models is that of developing a new (validation) data base (of "approximate" size and complexity as that of the original data base) and run this validation data base through the regression equations (using the same functional form) developed. The analyst must then evaluate the "total picture" including coefficients, statistics, statistical plots and techniques to determine if there is a significant difference in the results using the validation data base. Obviously this approach is out of the scope of this particular study since the data collection and analysis effort comprises a large portion of the project tasks costs and man-hours for model development.

A prediction interval (sometimes called a confidence interval) is an interval about which the analyst is confident (e.g. 95% confident) that the estimated value of the dependent variable (e.g. MTBF, MHTOT, etc.) for a particular observation in the

validation data base is within the bounds of the interval, where the lower the confidence level the smaller the interval. There are two major drawbacks in demonstrating predictive validity for multiple regression analysis models via the prediction interval approach. First, the prediction interval approach depends heavily upon the assumption that the equation obtained through statistical analyses is the correct form of the equation. Although many types of analyses, based on the data available, have shown statistically significant results (as demonstrated through replicative validity), it is not definitely known that the regression equation obtained is the correct form. This has been demonstrated many times in the physical and social sciences, where equations that were used for many years were updated as new data and information became available. Secondly, a predictive interval is calculated for each observation in the validation data base one at a time, and hence, the "total picture" of the effects that the validation data has on the coefficient, statistics, plots and tables cannot be evaluated. Prediction interval, however, has its merits when considering much less involved statistical methods of estimation than that of multiple regression analysis.

The approach used in this study for attempting the demonstration of predictive validity is cross verification of coefficients with a second sample of data where the validation data added to the original regression data make up the second sample of data. The coefficients using the original data are saved and can be compared with the coefficients obtained using the second sample. In addition, the "total picture" including statistics, plots, tables, etc. can be evaluated. The change in coefficients could be negligible, a 100% or more change could occur and a change in sign of the coefficients is also conceivable.

A cross verification of coefficients was performed on each of the 15 relationships developed using the 11 observations in the validation data base with the "total picture" of the results displayed in Appendix D. As in Appendix B space did not permit all plots to be included. The MTBMA (RUN20) equation, however has all statistics, plots, tables and techniques included. A summary of some of these results is shown in Table 10, including the dependent variable, the run numbers (for identification purposes), the percent change in coefficients, the multiple correlation squared, the F-value, the observations in the validation data base which had "large" residuals, the component-plus-residuals plots, the number of variables in the basic set and the results of the C_p-search using the second sample of data. For instance, the results for LSCTO (RUN60) showed no "significant" change in the values of the coefficients, $Ry^2 = .88$, F-value = 44.3. There were no observations in the validation data base which had larger residuals than the observations used to develop the regression equation; there were no discrepancies in the component-plus-residuals plot; there were 16 variables in the basic set of variables and the results of the C_p-search agreed with the original results in that there is no

TABLE 10

Validation Results Of The Cross Verification Of Coefficients With A Second Sample of Data

Dependent Variables	Run Number	% Change In Coefficients	R_y^2	F-Value	"Large" Residuals	Components Plus Residuals Plot	Basic Set of Variables	Cp-Search Technique
LMTBF	RUN01	ok	.87	31.7	209,low	ok	21	same
LMTBMA	RUN20	ok	.86	29.7	none	ok	12	same
LMHTOT	RUN30	DUP/54%	.92	65.5	210,high	ok	18	third
LMHUNS	RUN40	ok	.90	52.9	none	ok	8	second
LMHSHOP	RUN50	DUP/53%	.89	67.4	209,high	ok	11	sixth
LLSCTO	RUN60	ok	.88	44.3	none	ok	16	same
LLSCFD	RUN70	ok	.88	46.3	none	ok	8	same
NRTS	RUN80	ok	.66	16.5	none	ok	1	same
SRA	RUN90	ok	.87	46.8	none	ok	12	same
LTRAIN	RUN100	ok	.85	21.0		ok	9	same
LMHTOT*	RUN110	DUP/47%	.93	65.7	210,high	ok	15	fifth
LMHSHO*	RUN120	DUP/40%	.90	71.8	none	ok	12	second
LLSCFD*	RUN130	ok	.89	54.8	none	ok	14	second
LMHTOT**	RUN140	DUP/60%	.92	70.3	210,high	ok	16	third
LMHUNS**	RUN150	ok	.90	54.9	none	ok	7	second

* Uses NRTS as an independent variable.

** Results of Cp-search.

subset collection of variables which fits the data with less total squared erros than that which was developed.

The results of this limited validation investigation were quite encouraging. The multiple correlation coefficient squared fell only slightly in each case whereas the F-values increased in all but one case (MTBF). There were no major discrepancies in the component-plus-residuals plots for all 15 equations. The basic set of variables was about the same with an increase in some cases for the second sample of data. The results of the C_p-search technique were the same in 6 of the relationships. In 4 of the relationships the C_p-search technique indicated that the equations developed were the second "best" relationships, but in all cases the residual mean square (a measure of the error of prediction) was smallest for the equations developed. There were two observations in the validation data base that had "larger" residuals than the observations used to develop the regression relationships. Observation 209 was low for MTBF (RUN01) and high for MHSHO (RUN50) and observation 210 was high for all relationships fitted for MHTOT (RUN30, RUN110, RUN140). Observations 209 (WUC 71CAO, LORAN Receiver) and 210 (WUC 71GAO, Glide Slope Receiver) are both navigations equipment used in the C-5A aircraft. These two observations remained in the validation data base since investigation into each of the data elements (independent and dependent variables) did not indicate errors in the collected data.

Of the 15 equations developed for the ALPOS model there were only 5 equations (three involving MHTOT and two involving MHSHO) where the coefficient of only one variable (DUP in each case, where DUP is the unit price minus its d-statistic squared) changed by an average of only about 50%. The three equations involving MHTOT were those developed without NRTS as an independent variable, with NRTS as an independent variable and the results of the C_p-search technique to find the second "best" equation for MHTOT. The two equations involving MHSHO were those with and without NRTS as an independent variable. This change in the magnitude of the regression coefficient for the variable DUP could have been caused by the increase in the range of DUP which was a result of adding the validation data to the original data. The limited size of the validation data base could have also caused this instability. It should be noted, however, that in each of these 5 cases where the coefficient of DUP changed by about 50%, the variable DUP was among the three least influential variables in the 5 equations developed (see Appendix D). In the cases where the percent change in the coefficient was OK, there were only two equations with only one coefficient in each case which changed by about 30%, but in most of the remaining equations the percent change was far below 20% in each coefficient of each equation developed. It should be noted here that each of the coefficients could have changed by well over 100%. Moreover, the sign of each coefficient could also have changed (i.e., from a positive coefficient to a negative coefficient and vice versa). In these extreme cases, where the stability of the equation is questionable, there would have been cause to re-examine the validation data, the regression analysis data, and the estimating relationships developed.

Although the results of this limited validation investigation appear significant, it would be appropriate to increase the validation sample size in order to perform a more thorough investigation of the stability of the relationships. As more data becomes available, a cross verification of coefficients should be performed and results of the change in coefficients, statistics, and plots should be reviewed. It might be that other independent variables not considered in this study should be included or other forms of curvature (component-plus-residuals plots) of those variables already included could further demonstrate predictive validity of the relationships.

SECTION VI

CONCLUSIONS AND RECOMMENDATIONS

The cost and parametric estimating relationships obtained in this study were put through critical statistical examinations which covered a wide range of possible functional forms with a diverse spread across areas of avionics and aircraft types. It should be emphasized that the author is not implying that the correct functional forms of the relationships have definitely been obtained, but that there are statistically significant correlations between the independent and dependent variables considered in this study which can be used for predicting Operations and Maintenance costs of avionics equipment early in the preliminary/conceptual design phase. Although the results, statistical (section IV) and validation (section V), appear significant there are still areas for improvement that warrant futher study to increase the prediction capability of the equations developed.

The first recommendation is to expand the data base, i.e., increase the number of observations used to develop the relationships, consider additional independent variables, extend the ranges of the variables and expand to newer technology areas. Other independent variables not considered in this study such as the number of SRUs in an LRU, the number of integrated circuits (ICs) in an LRU and any other complexity factors that may have an influential effect on the dependent variables to be estimated, should be introduced into the regressions to reduce bias and improve the prediction capability of the equations. Although many of the variables considered had ranges over several orders of magnitude, some may not have been experienced over a range adequate enough to display their influence. Extending the ranges of the variables and using more "state of the art" equipment in the regression data base will enhance the capability of predicting advanced equipment costs.

The second recommendation is to perform a cross verification of coefficients where those aircraft and avionics equipment that have been in the Air Force inventory long enough to experience "good" data (e.g. F-16) make up the second sample of data. An evaluation of the results could lead to an update of the relationships already developed.

The third recommendation is to consider more transformations of the variables. The transformations considered covered a wide range of possible forms, but there are many other transformations that may better approximate the more complicated cases. For instance, some of the independent variables were percentages which covered a wide range of values. The Inverse Sine transformation can be used to weigh more heavily the small

percentages which have small variance. In addition, cross products of the variables can also be considered as viable transformations. Again there must be more data available to give the analyst the flexibility needed to consider many different functional forms.

The fourth recommendation is to investigate the possibilities of considering Non-linear Regression Analysis as a means of determining the correct functional form of the equations. Although the relationships considered in this study covered a wide range of possible functional forms, Non-linear Regression Analyses can be used to approximate even more complicated cases.

An area not touched upon in this study is that of error in the independent variables (Assumption A3). Some notable contributions on the subject of error in the independent variables have been made for the case of one independent variable (See Bibliography; Acton, Hocking and Leslie, Mandansky). It appears, however, that there are no results now in the statistical literature that lend to practical applications when multiple variables are considered.

We feel that this study has significantly contributed to the art of estimating support costs of avionics in the conceptual phase. The use of existing Air Force Data Systems has been demonstrated by the statistically significant correlations which exist between the variables considered, yielding relationships which can be successfully used to predict future costs. The Air Force Avionics Laboratory has been provided with the best tool developed to date to predict such costs.

APPENDIX A

MULTIPLE REGRESSION

ANALYSIS DATA

ALPOS
MULTIPLE REGRESSION ANALYSIS DATA

	FIGSEN UP MTBF	FIGCOM YO MTBMA	BOMNAV MT MHTOT	BOMSEN CC MHUNS	BOMCOM CD MHSMO	CARNAV DI LSCTO	CARCOM EM LSCFO	PS NRTS	XT SRA	SS TRAIN	PD	UF
1 71B2B	0.	0.	0.	0.	0.	0.	0.					
	13721.	443.	17.78	418.	0.926	0.0	14.0	0.0	0.0	86.0	288.	2.38
	244.	183.	0.179	0.883	0.894	3.139	2.597	13.0	0.	0.842		
2 71L8B	0.	0.	0.	0.	0.	0.	0.					
	9681.	1444.	48.88	491.	0.348	0.0	0.0	0.0	25.0	27.0	212.	2.38
	271.	181.	0.271	0.886	0.184	4.446	4.027	27.0	696.	1.188		
3 71M8B	0.	0.	0.	0.	0.	0.	0.					
	36913.	1676.	32.58	76.	0.047	0.0	76.0	0.0	0.0	24.0	828.	2.38
	0.	0.	0.385	0.119	0.184	0.000	0.000	16.0	3488.	7.987		
4 71P8B	0.	0.	0.	0.	0.	0.	0.					
	8418.	1473.	48.88	689.	0.468	0.0	1.0	0.0	25.0	95.0	77.	2.38
	0.	0.	0.261	0.187	0.153	5.982	3.388	11.0	756.	1.581		
5 71P8B	0.	0.	0.	0.	0.	0.	0.					
	2241.	1278.	36.58	756.	0.594	0.0	14.0	0.0	0.0	68.0	289.	2.38
	672.	476.	0.139	0.848	0.898	2.151	1.984	6.0	478.	0.686		
6 71T1B	0.	0.	0.	0.	0.	0.	0.					
	848.	91.	4.88	12.	0.132	0.0	0.0	0.0	0.0	100.0	28.	2.38
	4239.	2521.	0.816	0.888	0.819	0.288	0.272	9.0	191.	0.888		
7 724GB	0.	0.	0.	0.	0.	0.	0.					
	2855.	133.	1.25	84.	0.832	0.0	3.0	0.0	0.0	97.0	87.	2.38
	4653.	3548.	0.813	0.886	0.887	0.288	0.154	4.0	245.	0.887		
8 71G5B	0.	0.	0.	0.	0.	0.	0.					
	23327.	584.	14.88	421.	0.721	0.0	11.0	0.0	0.0	34.0	172.	2.38
	228.	94.	0.888	0.888	0.888	2.738	2.628	4.0	0.	0.888		
9 71FA8	0.	0.	0.	0.	0.	0.	0.					
	17232.	142.	13.98	412.	2.981	49.0	2.0	0.0	0.0	98.0	384.	2.38
	1559.	915.	0.119	0.822	0.887	2.489	1.432	25.0	1888.	0.265		
10 71FB8	0.	0.	0.	0.	0.	0.	0.					
	11988.	424.	13.98	61.	0.144	0.0	67.0	0.0	0.0	33.0	175.	2.38
	789.	577.	0.897	0.841	0.856	0.888	0.888	18.0	2167.	2.736		
11 71CA8	0.	0.	0.	0.	0.	0.	0.					
	5176.	288.	6.58	158.	0.758	0.0	0.0	0.0	0.0	100.0	28.	2.38
	4868.	2141.	0.826	0.818	0.816	0.415	0.415	18.0	1588.	0.853		
12 71DA8	0.	0.	0.	0.	0.	0.	0.					
	38145.	866.	29.88	32.	0.837	0.0	0.0	0.0	25.0	93.0	78.	2.38
	662.	487.	0.187	0.853	0.133	5.789	1.769	17.0	3556.	2.129		
13 51EA8	0.	0.	0.	0.	0.	0.	0.					
	15848.	642.	16.38	1831.	1.688	87.0	0.0	5.5	0.0	100.0	191.	2.38
	1138.	438.	0.215	0.865	0.149	3.389	2.479	14.0	1584.	0.586		
14 52AA8	0.	0.	0.	0.	0.	0.	0.					
	15699.	688.	11.88	1443.	2.373	94.4	1.0	4.6	0.0	100.0	288.	2.38
	1283.	835.	0.192	0.851	0.141	4.938	2.916	28.0	0.	0.784		

ALPOS
MULTIPLE REGRESSION ANALYSIS DATA
(CONTINUED)

	PIGSEN UP MTBF	PIGCOM VO MTBMA	BOMNAV MT MHTOT	BOMSEN CC MHUNS	BOMCOM CD MHSMD	CARNAV DI LSCTO	CARCOM EM LSCFD	PS NRTS	XT SRA	SS TRAIN	PD	UF
15 52A80	0.	0.	0.	0.	0.	0.	0.					
	36015.	688.	11.80	1142.	1.878	100.0	0.0	0.0	0.0	100.0	191.	2.38
	1941.	868.	0.191	0.042	0.149	5.397	2.635	25.0	3600.	0.467		
16 63B00	0.	0.	0.	0.	0.	0.	0.					
	2814.	78.	2.00	79.	1.013	0.0	0.0	0.0	0.0	100.0	7.	2.38
	3150.	1470.	0.022	0.000	0.013	0.000	0.000	0.0	497.	0.109		
17 71AE0	0.	0.	0.	0.	0.	0.	0.					
	192215.	1789.	48.00	3193.	1.866	85.7	1.5	5.7	0.0	98.5	249.	2.38
	255.	166.	1.273	0.177	1.096	0.000	0.000	0.0	0.	0.000		
18 74JA0	0.	0.	0.	0.	0.	0.	0.					
	29574.	8833.	21.50	260.	0.032	0.0	0.0	36.6	0.0	98.7	75.	2.38
	494.	262.	0.465	0.117	0.347	17.034	5.189	29.0	3896.	3.168		
19 74JC0	0.	0.	0.	0.	0.	0.	0.					
	25838.	1986.	21.00	1824.	0.957	88.5	0.0	4.7	0.0	100.0	1000.	2.38
	1100.	713.	0.138	0.038	0.098	2.189	1.775	26.0	2588.	0.419		
20 92GA1	0.	0.	0.	0.	0.	0.	0.					
	9431.	295.	7.00	275.	0.932	47.0	0.0	0.0	0.0	100.0	25.	3.10
	220.	109.	0.235	0.151	0.070	0.543	0.543	2.0	450.	0.100		
21 71Z40	0.	0.	0.	0.	0.	0.	0.					
	8027.	748.	20.50	2868.	2.754	75.0	0.0	0.0	25.0	99.9	100.	2.38
	996.	492.	0.057	0.049	0.010	2.024	0.034	0.0	650.	0.561		
22 71Z80	0.	0.	0.	0.	0.	0.	0.					
	1530.	154.	5.00	869.	4.344	50.0	0.0	0.0	0.0	100.0	25.	2.38
	4485.	1994.	0.000	0.000	0.000	0.159	0.159	0.0	650.	0.000		
23 71ZC0	0.	0.	0.	0.	0.	0.	0.					
	510.	94.	2.00	94.	1.000	0.0	0.0	0.0	0.0	100.0	10.	2.38
	0.	0.	0.000	0.000	0.000	0.349	0.233	0.0	80.	0.000		
24 73EG0	0.	0.	0.	0.	0.	0.	0.					
	65920.	1573.	47.40	3322.	2.112	93.0	0.0	0.0	0.0	100.0	225.	2.38
	0.	0.	2.388	1.366	0.917	56.641	28.682	7.0	4667.	17.050		
25 73EP0	0.	0.	0.	0.	0.	0.	0.					
	215330.	1495.	48.00	6916.	4.624	80.0	0.0	0.0	0.0	100.0	460.	2.38
	80.	51.	1.014	0.511	1.388	28.111	28.111	2.0	83964.	4.341		
26 73HA0	0.	0.	0.	0.	.	0.	0.					
	348533.	3178.	78.00	2654.	0.835	26.1	14.1	0.0	0.0	85.5	1560.	2.38
	101.	74.	2.394	0.494	1.898	63.235	45.276	10.0	8838.	7.637		
27 73HC0	0.	0.	0.	0.	0.	0.	0.					
	121411.	1827.	26.00	3427.	2.947	41.7	0.0	19.3	0.0	100.0	120.	2.38
	104.	76.	0.000	0.416	0.366	14.991	14.991	4.0	3365.	0.000		
28 73HA0	0.	0.	0.	0.	0.	0.	0.					
	62663.	1186.	46.00	433.	0.365	0.0	88.0	0.0	0.0	20.0	260.	2.30
	0.	0.	0.029	0.214	0.315	15.081	4.942	0.0	14285.	3.146		

ALPOS
MULTIPLE REGRESSION ANALYSIS DATA
(CONTINUED)

	FIGSEN UP MTBF	FIGCOM VO MTBMA	BOMNAV MT MHTOT	BOMSEN CC MHUNS	BOMCOM CO MHSMO	CARNAV OI LSCTO	CARCOM EM LSCFO	PS NRTS	XT SRA	SS TRAIN	PD	UF
29 73QB8	0.	0.	0.	0.	0.	0.	0.					
	105551.	659.	20.88	682.	0.914	0.0	0.0	78.0	0.0	100.0	120.	2.38
	170.	110.	0.624	0.104	0.448	23.728	23.728	6.0	3992.	1.553		
30 73SC8	0.	0.	0.	0.	0.	0.	0.					
	88884.	1048.	18.68	994.	0.946	98.0	0.0	0.0	0.0	100.0	60.	2.38
	263.	179.	0.212	0.125	0.084	0.000	0.000	18.0	9882.	0.000		
31 73X86	0.	0.	0.	0.	0.	0.	0.					
	12764.	2785.	27.98	846.	0.384	0.0	0.0	0.0	0.0	98.5	288.	2.38
	0.	0.	1.922	0.745	1.177	28.731	28.731	0.3	1485.	4.295		
32 73XE8	0.	0.	0.	0.	0.	0.	0.					
	38630.	713.	18.58	648.	0.989	0.0	0.2	91.0	0.0	91.0	0.	2.38
	626.	451.	0.643	0.164	0.472	0.393	0.393	0.0	0.	1.085		
33 73XF8	0.	0.	0.	0.	0.	0.	0.					
	5380.	626.	27.68	272.	0.329	0.0	2.0	0.0	0.0	95.0	920.	2.38
	299.	289.	0.428	0.198	0.228	6.357	6.357	0.0	1256.	1.587		
34 73XK8	0.	0.	0.	0.	0.	0.	0.					
	2587.	622.	16.48	3164.	5.087	0.0	0.0	0.0	0.0	100.0	100.	2.38
	140.	117.	1.394	0.382	1.008	24.228	22.108	7.0	926.	6.261		
35 75930	1.	0.	0.	0.	0.	0.	0.					
	3815.	94.	4.88	188.	1.149	0.0	0.0	0.0	0.0	100.0	7.	2.38
	5853.	1369.	0.844	0.822	0.022	0.581	0.227	0.0	287.	0.885		
36 74B08	1.	0.	0.	0.	0.	0.	0.					
	10128.	1689.	43.78	1126.	0.788	0.0	39.0	0.0	0.0	81.0	212.	2.38
	193.	127.	0.342	0.101	0.234	6.478	4.464	5.0	0.	1.588		
37 74BF8	1.	0.	0.	0.	0.	0.	0.					
	15258.	1377.	78.58	399.	0.298	0.0	0.0	0.0	100.0	98.0	988.	2.38
	168.	117.	0.263	0.112	0.148	4.844	3.445	25.0	815.	1.877		
38 74B10	1.	0.	0.	0.	0.	0.	0.					
	6267.	577.	11.88	35.	0.061	0.0	100.0	0.0	0.0	0.0	430.	2.38
	2130.	1265.	0.822	0.815	0.006	1.116	0.403	93.0	739.	0.248		
39 76A10	1.	0.	0.	0.	0.	0.	0.					
	2652.	568.	15.88	911.	1.627	0.0	0.0	0.0	0.0	100.0	335.	2.38
	1513.	382.	0.863	0.832	0.030	1.948	1.852	0.0	326.	0.557		
40 76GA8	1.	0.	0.	0.	0.	0.	0.					
	19274.	551.	25.88	1319.	2.394	100.0	0.0	0.0	0.0	100.0	1300.	0.38
	398.	181.	0.882	0.881	0.000	0.283	0.079	42.0	0.	0.048		
41 74FF8	1.	0.	0.	0.	0.	0.	0.					
	220943.	2279.	41.88	7638.	3.353	100.0	0.0	0.0	0.0	100.0	1300.	2.38
	310.	198.	0.335	0.117	0.217	4.892	4.892	19.0	0.	0.434		
42 74P48	1.	0.	0.	0.	0.	0.	0.					
	150000.	5330.	173.78	1558.	0.292	0.0	0.0	0.0	100.0	99.0	270.	2.38
	230.	130.	0.896	0.245	0.645	13.875	13.164	15.0	211.	2.002		

ALPOS
MULTIPLE REGRESSION ANALYSIS DATA
(CONTINUED)

	FIGSEN UP MTBF	FIGCOM VO MTBMA	BOMNAV MT MHTOT	BOMSEN CC MHUMS	BOMCOM CD MHSMD	CARNAV DI LSCTO	CARCOM EM LSCFD	PS MRTS	XT SRA	SS TRAIN	PD	UF
43 74FN8	1.	0.	0.	0.	0.	0.	0.					
	42823.	1866.	35.00	932.	0.499	0.0	0.0	100.0	0.0	100.0	1620.	2.30
	359.	177.	0.412	0.133	0.275	7.185	6.589	14.0	1529.	0.987		
44 74FU8	1.	0.	0.	0.	0.	0.	0.					
	142664.	3659.	110.00	10.	0.005	0.0	100.0	0.0	0.0	0.0	400.	2.30
	324.	251.	0.755	0.215	0.538	20.277	10.668	10.0	5398.	2.218		
45 73CR8	1.	0.	0.	0.	0.	0.	0.					
	24642.	387.	0.00	529.	1.723	0.0	2.0	0.0	0.0	98.6	300.	0.83
	985.	985.	0.000	0.000	0.000	0.000	0.000	10.0	0.	0.000		
46 73CG8	1.	0.	0.	0.	0.	0.	0.					
	43912.	993.	12.00	53.	0.059	0.0	100.0	0.0	0.0	0.0	60.	0.83
	914.	914.	0.011	0.004	0.007	0.100	0.135	67.0	0.	0.000		
47 858H8	1.	0.	0.	0.	0.	0.	0.					
	2876.	768.	16.00	1388.	1.721	95.9	1.3	2.0	0.0	98.7	122.	2.30
	1853.	598.	0.000	0.000	0.000	0.000	0.000	25.0	234.	0.337		
48 74FC8	1.	0.	0.	0.	0.	0.	0.					
	125493.	1173.	25.70	985.	0.840	0.0	0.0	0.0	0.0	100.0	300.	2.30
	322.	237.	0.772	0.163	0.688	16.100	13.477	20.0	2000.	1.670		
49 74FJ8	1.	0.	0.	0.	0.	0.	0.					
	32877.	1723.	28.20	1075.	0.624	0.0	0.7	0.0	0.0	91.3	123.	2.30
	644.	485.	0.283	0.052	0.230	19.512	6.748	15.0	0.	1.598		
50 74FK8	1.	0.	0.	0.	0.	0.	0.					
	4727.	119.	3.30	24.	0.202	90.0	10.0	0.0	0.0	90.0	20.	2.30
	3719.	1419.	0.822	0.011	0.810	0.347	0.315	17.0	195.	0.847		
51 74FQ8	..	0.	0.	0.	0.	0.	0.					
	120885.	1747.	100.00	8299.	4.750	95.9	0.0	0.0	0.0	100.0	637.	2.30
	248.	115.	0.772	0.227	0.472	42.212	19.761	23.0	10000.	2.949		
52 74KA8	1.	0.	0.	0.	0.	0.	0.					
	88037.	2628.	38.00	522.	0.199	0.0	0.0	6.1	0.0	99.7	177.	2.50
	414.	193.	0.568	0.138	0.521	9.023	8.886	24.0	0.	1.331		
53 74KC8	1.	0.	0.	0.	0.	0.	0.					
	36999.	892.	16.00	1756.	2.538	82.2	0.0	0.3	0.0	100.0	130.	2.30
	781.	444.	0.219	0.053	0.166	5.778	2.267	24.0	3000.	1.312		
54 74CA8	1.	0.	0.	0.	0.	0.	0.					
	19882.	1468.	38.00	2242.	1.527	85.0	1.2	0.0	0.0	98.0	517.	2.30
	1164.	814.	0.000	0.043	0.025	0.000	0.000	3.0	2837.	0.000		
55 74CB8	1.	0.	0.	0.	0.	0.	0.					
	22778.	1476.	44.30	819.	0.555	98.0	1.1	0.0	0.0	98.0	101.	2.30
	1212.	874.	0.969	0.038	0.932	1.970	1.031	0.0	0.	0.219		
56 74CC8	1.	0.	0.	0.	0.	0.	0.					
	17025.	477.	0.00	917.	1.922	99.1	0.0	0.0	0.0	99.4	101.	2.30
	1589.	895.	0.050	0.038	0.023	0.071	0.765	3.0	1755.	0.102		

ALPOS
MULTIPLE REGRESSION ANALYSIS DATA
(CONTINUED)

		FIGSEN UP MTBF	FIGCOM VO MTBMA	BOMNAV RT MMTOT	BOMSEN CC MMUNS	BOMCOM CO MMSMO	CARNAV DI L8CTO	CARCOM EM L8CFD	PS NRTS	XT SRA	SS TRAIN	PD	UF
57	74FA1	1.	0.	0.	0.	0.	0.	0.					
		22595.	2701.	54.00	4199.	1.555	99.8	0.2	0.0	0.0	99.8	124.	3.10
		107.	112.	0.551	0.262	0.201	10.490	14.448	4.3	2471.	0.007		
58	74E80	1.	0.	0.	0.	0.	0.	0.					
		37137.	958.	19.00	1779.	1.073	81.5	0.7	6.0	0.0	99.3	135.	2.30
		674.	363.	0.228	0.050	0.107	4.798	3.552	14.0	1110.	0.487		
59	73PH0	1.	0.	0.	0.	0.	0.	0.					
		31510.	952.	32.00	1051.	1.114	0.0	0.0	100.0	0.0	100.0	465.	1.20
		312.	175.	0.222	0.071	0.150	4.274	4.274	0.0	1200.	0.511		
60	73P80	1.	0.	0.	0.	0.	0.	0.					
		566500.	1090.	51.00	3245.	1.710	90.0	0.0	0.0	0.0	100.0	500.	1.20
		52.	30.	0.747	0.170	0.500	11.951	9.747	4.0	1004.	0.244		
61	73PD0	1.	0.	0.	0.	0.	0.	0.					
		139554.	4072.	145.00	726.	0.170	0.0	0.0	0.0	100.0	100.0	3000.	1.20
		61.	47.	0.500	0.134	0.446	15.402	9.315	14.0	1200.	1.050		
62	73PF0	1.	0.	0.	0.	0.	0.	0.					
		264550.	2352.	51.00	2452.	1.043	00.2	0.0	0.0	0.0	100.0	275.	1.20
		200.	109.	0.107	0.030	0.070	1.590	1.590	3.0	0.	0.303		
63	73PH0	1.	0.	0.	0.	0.	0.	0.					
		49033.	1445.	33.00	707.	0.009	20.0	13.4	0.0	0.0	00.1	145.	1.20
		0.	0.	0.170	0.001	0.117	3.035	1.210	1.0	1271.	1.401		
64	71NA0	0.	1.	0.	0.	0.	0.	0.					
		7191.	1307.	30.00	1074.	1.225	0.0	0.0	0.0	25.0	97.0	250.	2.30
		122.	70.	0.750	0.231	0.522	12.515	10.000	4.0	092.	3.345		
65	710U0	0.	1.	0.	0.	0.	0.	0.					
		7191.	1307.	30.00	1074.	1.225	0.0	0.0	0.0	25.0	97.0	250.	2.30
		205.	120.	0.495	0.143	0.350	0.200	0.057	5.2	092.	2.310		
66	63AA0	0.	1.	0.	0.	0.	0.	0.					
		12050.	1120.	29.00	790.	0.705	0.0	0.0	0.0	25.0	97.0	150.	2.30
		255.	154.	0.472	0.110	0.353	7.007	0.975	10.0	001.	1.400		
67	65AA0	0.	1.	0.	0.	0.	0.	0.					
		14271.	377.	14.00	002.	2.005	0.0	0.0	0.0	R5.0	100.0	04.	2.30
		400.	317.	0.337	0.002	0.275	0.243	4.220	10.0	0.	0.772		
68	63AG0	0.	1.	0.	0.	0.	0.	0.					
		7570.	420.	10.30	505.	1.307	50.1	2.7	0.0	0.0	07.3	32.	2.30
		020.	552.	0.110	0.031	0.007	2.500	1.107	21.0	401.	0.407		
69	630C0	0.	1.	0.	0.	0.	0.	0.					
		1005.	207.	12.00	742.	2.770	53.1	0.0	30.3	0.0	100.0	34.	2.33
		304.	170.	0.000	0.000	0.000	5.222	5.107	31.0	0.	0.001		
70	630F0	0.	1.	0.	0.	0.	0.	0.					
		2057.	70.	2.00	100.	2.030	00.7	0.0	11.3	0.0	100.0	3.	2.30
		0310.	2050.	0.010	0.004	0.015	0.222	0.222	0.0	201.	0.031		

ALPOS
MULTIPLE REGRESSION ANALYSIS DATA
(CONTINUED)

	FIGSEN UP MTBF	FIGCOM VO MTBMA	BOMNAV MT MMTOT	BOMSEN CC MMUNS	BOMCOM CD MMSMO	CARNAV DI LSCTU	CARCOM EM LSCFO	PS NRTS	XT SRA	SS TRAIN	PD	UF
71 71ABE	0.	0.	1.	0.	0.	0.	0.					
	1188.	288.	7.50	214.	0.764	0.0	7.0	0.0	0.0	93.0	7.	1.30
	1288.	1000.	0.810	0.806	0.812	0.285	0.285	0.0	159.	0.851		
72 71ADA	0.	0.	1.	0.	0.	0.	0.					
	2744.	1732.	60.00	924.	0.533	0.0	0.0	0.0	0.0	0.0	17.	1.30
	116.	98.	0.357	0.857	0.300	5.917	5.035	4.0	671.	0.825		
73 73CBA	0.	0.	1.	0.	0.	0.	0.					
	5928.	6478.	90.00	321.	0.050	0.0	0.0	0.0	25.0	25.0	1640.	1.30
	147.	121.	0.297	0.091	0.286	5.004	3.390	0.0	1819.	0.781		
74 71ACC	0.	0.	1.	0.	0.	0.	0.					
	155.	66.	2.60	78.	0.907	0.0	0.0	0.0	0.0	0.0	17.	1.30
	711.	560.	0.026	0.009	0.016	0.305	0.307	3.0	79.	0.037		
75 73CBQ	0.	0.	1.	0.	0.	0.	0.					
	156.	30.	1.20	36.	1.267	0.0	0.0	0.0	0.0	0.0	34.	1.30
	3704.	3704.	0.000	0.005	0.002	0.074	0.059	0.0	71.	0.007		
76 73CEN	0.	0.	1.	0.	0.	0.	0.					
	2702.	256.	10.50	28.	0.070	0.0	100.0	0.0	0.0	0.0	100.	1.30
	3013.	1701.	0.000	0.007	0.001	0.015	0.110	100.0	695.	0.007		
77 73CFK	0.	0.	1.	0.	0.	0.	0.					
	10720.	0200.	110.00	501.	0.050	0.0	0.0	0.0	25.0	00.5	152.	1.30
	00.	45.	0.771	0.331	0.440	15.025	11.011	3.0	5045.	1.010		
78 73DAM	0.	0.	1.	0.	0.	0.	0.					
	5720.	3000.	50.00	150.	0.051	0.0	57.0	0.0	0.0	0.0	225.	1.30
	301.	233.	0.130	0.046	0.053	2.209	1.045	10.0	241.	0.307		
79 73EBA	0.	0.	1.	0.	0.	0.	0.					
	1347.	132.	3.40	120.	0.009	0.0	0.0	0.0	0.0	00.0	34.	1.30
	1102.	049.	0.010	0.000	0.000	0.254	0.150	0.0	513.	0.033		
80 73EBF	0.	0.	1.	0.	0.	0.	0.					
	2500.	404.	11.50	177.	0.301	0.0	0.0	0.0	0.0	37.0	130.	1.30
	150.	113.	0.119	0.053	0.002	2.252	1.400	24.0	209.	0.353		
81 71CAB	0.	0.	1.	0.	0.	0.	0.					
	2079.	275.	7.30	200.	1.055	0.0	0.0	0.0	0.0	100.0	0.	1.30
	1723.	1210.	0.015	0.005	0.009	0.214	0.214	0.0	277.	0.006		
82 73EGB	0.	0.	1.	0.	0.	0.	0.					
	07249.	1573.	47.40	3322.	2.112	03.0	0.0	0.0	0.0	100.0	225.	1.30
	173.	04.	0.003	0.036	0.325	27.037	7.217	9.0	4043.	3.035		
83 73MCB	0.	0.	1.	0.	0.	0.	0.					
	121411.	1027.	20.00	3027.	2.047	41.7	10.3	0.0	0.0	100.0	120.	1.30
	59.	32.	0.545	0.295	0.247	24.277	7.020	0.0	3503.	1.371		
84 73LAB	0.	0.	1.	0.	0.	0.	0.					
	31054.	1272.	30.00	2002.	2.344	0.0	0.0	0.0	0.0	00.1	200.	1.30
	73.	44.	0.000	0.240	0.730	23.000	17.572	0.0	2110.	1.415		

ALPOS
MULTIPLE REGRESSION ANALYSIS DATA
(CONTINUED)

	FIGSEN UP MTBF	FIGCOM VO MTBMA	BOMNAV MT MHTOT	BOMSEN CC MHUNS	BOMCOM CO MHSHO	CARNAV DI LSCTO	CARCOM EM LSCFO	PS MRTB	XT SRA	SS TRAIN	PD	UF
85 77EC0	0.	0.	0.	1.	0.	0.	0.					
	9701.	1760.	49.00	946.	0.536	11.0	5.9	0.0	0.0	94.7	350.	1.30
	445.	340.	0.070	0.032	0.046	2.200	1.173	9.0	3003.	0.205		
86 77EE0	0.	0.	0.	1.	0.	0.	0.					
	835.	222.	0.50	9.	0.04.	0.0	100.0	0.0	0.0	0.0	100.	1.30
	7004.	7530.	0.001	0.001	0.000	0.000	0.000	0.0	0.	0.000		
87 770CA	0.	0.	0.	1.	0.	0.	0.					
	31000.	1223.	26.40	1457.	1.191	0.0	0.0	0.0	0.0	100.0	145.	1.30
	959.	837.	0.000	0.000	0.000	0.010	0.201	17.0	2622.	0.159		
88 770B0	0.	0.	0.	1.	0.	0.	0.					
	835.	222.	0.50	9.	0.041	0.0	100.0	0.0	0.0	0.0	100.	1.30
	8869.	8978.	0.002	0.002	0.000	0.024	0.024	75.0	0.	0.004		
89 76AEA	0.	0.	0.	1.	0.	0.	0.					
	42000.	2666.	92.00	2375.	0.891	0.0	0.0	0.0	100.0	90.9	1300.	0.30
	130.	69.	0.026	0.000	0.010	1.239	0.246	33.0	3921.	0.277		
90 73KA0	0.	0.	0.	1.	0.	0.	0.					
	16201.	922.	19.00	3241.	3.211	0.0	1.2	0.0	0.0	90.6	200.	1.30
	165.	113.	0.071	0.335	0.036	15.779	13.742	0.0	982.	1.303		
91 630AA	0.	0.	0.	0.	1.	0.	0.					
	3840.	1660.	49.00	1153.	0.606	0.0	0.0	0.0	25.0	23.0	500.	1.30
	79.	61.	0.353	0.071	0.202	5.779	4.036	2.0	846.	0.721		
92 63CAA	0.	0.	0.	0.	1.	0.	0.					
	3840.	1660.	49.00	1153.	0.606	0.0	0.0	0.0	25.0	23.0	500.	1.30
	99.	78.	0.284	0.053	0.232	6.675	3.034	2.0	846.	0.610		
93 650AA	0.	0.	0.	0.	1.	0.	0.					
	3914.	1844.	29.00	1236.	0.670	0.0	1.0	0.0	15.0	97.5	90.	1.30
	305.	250.	0.000	0.021	0.007	0.020	0.020	5.7	024.	0.105		
94 615BA	0.	0.	0.	0.	1.	0.	0.					
	9004.	1009.	49.00	1370.	0.737	0.0	0.0	0.0	0.0	70.0	300.	1.30
	203.	173.	0.120	0.039	0.004	0.000	0.000	5.4	610.	0.205		
95 61AA0	0.	0.	0.	0.	1.	0.	0.					
	30591.	370.	13.12	195.	0.516	0.0	0.0	0.0	25.0	100.0	150.	1.30
	439.	210.	0.150	0.040	0.110	4.934	1.293	17.0	4405.	0.700		
96 61A90	0.	0.	0.	0.	1.	0.	0.					
	14020.	599.	23.13	432.	0.722	0.0	32.0	24.2	0.0	100.0	150.	1.30
	430.	204.	0.101	0.051	0.141	4.031	1.042	17.0	0.	0.010		
97 61AC0	0.	0.	0.	0.	1.	0.	0.					
	12303.	135.	4.17	471.	3.400	0.0	0.0	0.0	0.0	100.0	70.	1.30
	299.	204.	0.112	0.037	0.074	2.310	1.001	4.0	000.	0.159		
98 72AA0	0.	0.	0.	0.	1.	0.	0.					
	550.	30.	1.00	30.	1.050	0.0	0.0	0.0	0.0	100.0	0.	1.30
	0009.	3444.	0.005	0.001	0.004	0.074	0.074	0.0	0.	0.015		

ALPOS
MULTIPLE REGRESSION ANALYSIS DATA
(CONTINUED)

	FIGSEN UP MTBF	FIGCOM VQ MTBMA	BOMNAV MT MMTOT	BOMSEN CC MMUNS	BOMCOM CO MMSMO	CARNAV DI LSCTO	CARCOM EM LSCFO	PS NRTS	XT SRA	SS TRAIN	PD	UF
99 72ACB	0.	0.	0.	0.	1.	0.	0.					
	12302.	88.	4.00	62.	0.912	0.0	0.0	0.0	25.0	96.2	10.	1.30
	1292.	696.	0.460	0.017	0.043	0.051	0.051	0.6	661.	0.037		
100 71CAB	0.	0.	0.	0.	0.	1.	0.					
	3263.	1734.	60.00	924.	0.533	0.0	0.0	0.0	25.0	0.0	500.	1.20
	84.	78.	0.322	0.069	0.252	0.135	4.533	4.0	858.	0.004		
101 72EAA	0.	0.	0.	0.	0.	1.	0.					
	3700.	6478.	87.50	321.	0.050	0.0	0.0	0.0	25.0	25.0	1040.	1.20
	166.	133.	0.241	0.003	0.176	4.402	3.964	16.0	993.	0.750		
102 72ECA	0.	0.	0.	0.	0.	1.	0.					
	2851.	4243.	63.36	4363.	1.020	0.0	0.0	0.2	0.0	0.0	180.	1.20
	363.	338.	0.000	0.000	0.000	0.783	0.641	0.0	478.	0.122		
103 72BPD	0.	0.	0.	0.	0.	1.	0.					
	253300.	2479.	75.00	4585.	1.020	30.0	1.0	0.0	0.0	90.0	787.	1.20
	144.	72.	0.207	0.102	0.194	30.349	3.167	0.0	10767.	5.761		
104 71JAB	0.	0.	0.	0.	0.	1.	0.					
	6247.	479.	12.00	1013.	2.115	0.0	1.0	0.0	0.0	99.0	178.	1.20
	314.	269.	0.260	0.051	0.200	1.592	2.478	2.0	267.	0.602		
105 71LAB	0.	0.	0.	0.	0.	1.	0.					
	34862.	1260.	32.00	2743.	2.177	55.0	0.0	0.0	12.0	99.5	265.	1.20
	186.	181.	0.302	0.105	0.195	0.995	5.002	17.0	1038.	1.403		
106 72DNB	0.	0.	0.	0.	0.	1.	0.					
	100450.	1511.	39.00	1844.	3.691	87.0	1.0	0.0	0.0	98.7	650.	1.20
	373.	127.	0.194	0.110	0.292	11.311	11.311	0.0	13502.	0.329		
107 72ACB	0.	0.	0.	0.	0.	1.	0.					
	10793.	432.	31.00	592.	1.370	0.0	1.0	0.0	0.0	99.0	851.	1.20
	557.	284.	0.053	0.020	0.032	1.170	0.710	39.0	2865.	0.110		
108 71716	0.	0.	0.	0.	0.	1.	0.					
	1265.	294.	7.50	214.	0.720	0.0	0.0	0.0	0.0	100.0	20.	1.20
	1723.	1367.	0.010	0.020	0.000	0.215	0.194	4.0	252.	0.002		
109 71310	0.	0.	0.	0.	0.	1.	0.					
	2745.	1734.	60.00	924.	0.533	0.0	0.0	0.0	25.0	0.0	500.	1.20
	122.	104.	0.247	0.065	0.179	3.630	3.260	5.0	604.	0.000		
110 72RPB	0.	0.	0.	0.	0.	1.	0.					
	1602.	399.	14.00	320.	0.022	0.0	0.0	100.0	0.0	30.0	600.	1.20
	395.	272.	0.735	0.015	0.019	0.543	0.501	4.0	402.	0.046		
111 72R00	0.	0.	0.	0.	0.	1.	0.					
	2165.	300.	0.00	55.	0.239	0.0	67.0	0.0	0.0	0.0	660.	1.20
	2573.	1406.	0.007	0.003	0.004	0.110	0.095	0.0	161.	0.013		
112 71JCE	0.	0.	0.	0.	0.	1.	0.					
	7025.	91.	2.10	26.	0.286	0.0	50.0	0.0	0.0	50.0	7.	1.20
	7824.	1153.	0.030	0.014	0.016	0.423	0.423	0.0	366.	0.006		

ALPOS
MULTIPLE REGRESSION ANALYSIS DATA
(CONTINUED)

	FIGSEN UP MTBF	FIGCOM VO MTBMA	BOMNAV MT MHTOT	BOMSEN CC MHUAS	BOMCOM CD MHBMO	CARNAV DI LSCTO	CARCOM EM LSCFD	PS NRTS	XT SRA	SS TRAIN	FD	UF
113 72AE0	0.	0.	0.	0.	0.	1.	0.					
	88945.	2267.	58.00	4275.	1,000	100.0	0.0	0.0	0.0	100.0	333.	1.20
	0.	0.	0.145	0.093	0.050	3.371	1.720	15.0	3446.	0.712		
114 72CC0	0.	0.	0.	0.	0.	1.	0.					
	27391.	1097.	26.00	1269.	1.175	70.0	0.0	0.0	0.0	100.0	85.	1.20
	397.	272.	0.032	0.018	0.014	1.301	0.629	27.0	3481.	0.186		
115 71IA0	0.	0.	0.	0.	0.	1.	0.					
	8027.	748.	20.50	2060.	2,754	75.0	0.0	0.0	25.0	99.0	100.	1.20
	1092.	1065.	0.000	0.000	0.000	0.000	0.000	0.0	650.	0.022		
116 71I80	0.	0.	0.	0.	0.	1.	0.					
	1530.	154.	5.00	669.	4,344	50.0	0.0	0.0	0.0	100.0	25.	1.20
	2575.	1766.	0.004	0.002	0.002	0.053	0.040	0.0	650.	0.003		
117 71I00	0.	0.	0.	0.	0.	1.	0.					
	516.	94.	2.00	94.	1.000	0.0	0.0	0.0	0.0	100.0	10.	1.20
	7729.	4637.	0.002	0.000	0.001	0.016	0.016	0.0	50.	0.001		
118 656AA	0.	0.	0.	0.	0.	0.	1.					
	3914.	1044.	29.00	1236.	0.670	0.0	1.0	0.0	15.0	97.5	90.	1.20
	254.	199.	0.070	0.021	0.050	1.100	1.037	3.0	624.	0.207		
119 63AF0	0.	0.	0.	0.	0.	0.	1.					
	4833.	1080.	31.00	1186.	0.700	0.0	0.0	0.0	25.0	23.0	502.	1.20
	74.	55.	1.102	0.257	0.004	4.057	3.196	2.0	697.	2.770		
120 63AA0	0.	0.	0.	0.	0.	0.	1.					
	10712.	1120.	41.00	790.	0.705	0.0	0.0	0.0	25.0	97.0	150.	1.20
	100.	139.	0.255	0.007	0.103	3.770	3.653	1.0	580.	0.493		
121 63121	0.	0.	0.	0.	0.	0.	1.					
	3040.	1000.	49.00	1153.	0.000	0.0	0.0	0.0	25.0	23.0	500.	1.20
	120.	110.	0.174	0.041	0.131	2.320	1.051	0.1	1002.	0.333		
122 63AAA	0.	0.	0.	0.	0.	0.	1.					
	6345.	242.	9.00	1015.	0.074	44.0	0.0	0.0	19.0	100.0	35.	1.20
	490.	293.	0.034	0.023	0.010	0.579	0.532	30.0	585.	0.005		
123 554L0	0.	0.	0.	0.	0.	0.	1.					
	30040.	1002.	40.00	301.	0.227	00.7	0.0	10.4	0.0	100.0	200.	1.20
	253.	100.	0.050	0.020	0.020	2.530	0.033	20.0	1700.	0.243		
124 55AV0	0.	0.	0.	0.	1.	0.	1.					
	103720.	1540.	30.00	725.	0.460	75.4	0.0	24.5	0.0	100.0	300.	1.20
	113.	00.	0.200	0.045	0.021	1.520	0.701	13.0	1700.	0.271		
125 61AA0	0.	0.	0.	0.	0.	0.	1.					
	24205.	309.	13.20	195.	0.501	0.0	0.0	0.0	25.0	100.0	100.	1.20
	300.	247.	0.203	0.091	0.170	4.302	4.302	2.0	3030.	0.002		
126 61AE0	0.	0.	0.	0.	0.	0.	1.					
	0050.	135.	4.30	471.	3,400	0.0	0.0	0.0	0.0	100.0	70.	1.20
	400.	320.	0.151	0.001	0.000	2.403	2.002	5.0	551.	0.301		

ALPOS
MULTIPLE REGRESSION ANALYSIS DATA
(CONTINUED)

	FIGSEN UP MTBF	FIGCOM VO MTBMA	BOMNAV MT MMTOT	BOMSEN CC MMUNS	BOMCOM CO MMSMO	CARNAV DI LSCTO	CARCOM EM LSCFO	PS NRTS	XT BRA	SS TRAIN	PD	UF
127 62AA0	0.	0.	0.	0.	0.	0.	1.					
	3175.	504.	15.98	1116.	1.979	0.0	0.0	0.0	25.0	100.0	263.	1.28
	763.	788.	0.181	0.029	0.072	1.534	1.486	6.0	297.	0.289		
128 64211	0.	0.	0.	0.	0.	0.	1.					
	833.	146.	4.88	37.	0.253	0.0	0.0	0.0	0.0	100.0	7.	1.28
	1646.	971.	0.886	0.003	0.002	0.000	0.877	0.0	120.	0.000		

APPENDIX B

RESULTS OF THE

REGRESSION ANALYSIS

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN1 DEP VAR IS LNTBF MIN Y = 3.9440 00 MAX Y = 8.9850 00 RANGE Y = 5.0520 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPOS" MODEL
LNTBF = B(0) + B(1)FIGCOM + B(2)BOMNAV + B(3)BOMCOM + B(4)CARNAV
+ B(5)CARCOM + B(6)UP + B(7)CD + B(8)DI + B(9)EM
+ B(10)MVD + B(11)MMT + B(12)M55 + B(13)MUF + B(14)DVD
+ B(15)DMT + B(16)DP5 + B(17)DXT + B(18)D55 + B(19)DPD
+ B(20)DUF + B(21)LUP + B(22)LVD + B(23)LPD
LNTBF = LN(MTBF)
MTBF = MEAN OPERATING TIME BETWEEN FAILURE

IND.VAR(I)	NAME	COEF. B(I)	S.E. COEF.	T-VALUE	M(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL.IMP.X(I)
0		1.579730 01							
1	FIGCOM	-7.766480-01	2.220-01	3.5	0.3816	0.0	1.0000 00	1.0000 00	0.15
2	BOMNAV	-1.173180 00	1.990-01	5.9	0.5346	0.0	1.0000 00	1.0000 00	0.23
3	BOMCOM	-1.287620 00	2.430-01	5.3	0.5397	0.0	1.0000 00	1.0000 00	0.24
4	CARNAV	-5.961980-01	1.850-01	3.1	0.5474	0.0	1.0000 00	1.0000 00	0.11
5	CARCOM	-1.195520 00	2.310-01	5.2	0.5778	0.0	1.0000 00	1.0000 00	0.24
6	UP	-3.974440-05	9.430-07	3.9	0.6484	1.5380 02	5.6650 05	5.6630 05	0.41
7	CD	-2.226490-01	4.350-02	5.1	0.3575	4.9230-03	6.6740 00	6.6690 00	0.29
8	DI	1.218480-02	1.520-03	8.7	0.4211	0.0	1.0000 02	1.0000 02	0.29
9	EM	1.834550-02	2.830-03	6.5	0.5945	0.0	1.0000 02	1.0000 02	0.36
10	MVD	5.995930-04	9.970-05	6.0	0.9131	-1.2510 03	8.9190 03	9.1700 03	0.97
11	MMT	-1.855270-02	3.540-03	5.2	0.8468	-3.0280 01	1.4250 02	1.7270 02	0.36
12	M55	1.327830-02	2.360-03	5.6	0.7341	-7.9980 01	2.1980 01	1.0000 02	0.26
13	MUF	-3.654190-01	1.230-01	2.9	0.9363	-1.4300 00	1.3720 00	2.8020 00	0.17
14	DVD	-1.959470-07	2.710-08	3.9	0.8324	2.3940 03	2.4740 07	2.4740 07	0.52
15	DMT	1.279350-04	4.770-05	2.7	0.7221	3.6860 00	1.1750 04	1.1750 04	0.38
16	DP5	2.219590-04	1.260-04	1.8	0.3839	3.8690 01	2.9680 03	2.9290 03	0.13
17	DXT	-1.484820-04	9.780-05	1.5	0.5504	2.9890 02	3.3370 03	3.0410 03	0.09
18	D55	2.253580-04	7.640-05	3.0	0.2548	1.3400 01	2.0790 03	2.0660 03	0.13
19	DPD	-4.125220-07	1.280-07	3.2	0.3539	6.2580 02	4.1810 05	4.1800 05	0.33
20	DUF	-6.866550-01	1.520-01	5.5	0.2717	1.7640-01	2.0160 00	1.8440 00	0.32
21	LUP	-2.417730-01	5.680-02	4.3	0.7865	5.8300 00	1.3250 01	8.2170 00	0.39
22	LVD	-9.249340-01	1.430-01	6.5	0.9338	3.4810 00	9.8120 00	5.8310 00	1.93
23	LPD	-1.817410-01	5.180-02	3.5	0.6574	1.0990 00	8.0660 00	6.9680 00	0.14

NO. OF OBSERVATIONS	128
NO. OF IND. VARIABLES	23
RESIDUAL DEGREES OF FREEDOM	96
F-VALUE	32.1
RESIDUAL ROOT MEAN SQUARE	0.47536875
RESIDUAL MEAN SQUARE	0.22616373
RESIDUAL SUM OF SQUARES	21.71171899
TOTAL SUM OF SQUARES	188.93998938
MULT. CORREL. COEF. SQUARED	.8851

REQUIRED X(I) PRECISION
(DIGIT RIGHT OF DECIMAL POSITIVE,
LEFT OF DECIMAL NEGATIVE)

IND.VAR(I)	DIGIT
1	-1
2	-1
3	-1
4	-1
5	-1
6	-6
7	1
8	-2
9	-2
10	-3
11	-2
12	-2
13	1
14	-7
15	-4
16	-3
17	-4
18	-4
19	-6
20	1
21	1
22	1
23	1

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

D&M MODEL RUN1 DEP VAR IS LMTBF RESIDUAL ROOT MEAN SQUARE OF FITTED EQUATION: 0.48

STANDARD DEVIATION ESTIMATED FROM RESIDUALS OF NEIGHBORING OBSERVATIONS (OBSERVATIONS 1 TO 4 APART IN FITTED Y ORDER).

NO.	CUMULATIVE STD DEV	ORDERED BY WSSD			DEL RESIDUALS	ORDERED BY FITTED Y					SEQ.
		WSSD	OBSV.	OBSV.		WSSD	DEL RESIDUALS	FITTED Y	OBSV.		
1	0.00	0.0	88	86	0.00	44.15	0.35	4.85	81		1
2	0.29	0.0	85	84	0.52	10.43	0.67	4.22	68		2
3	0.25	0.0	92	91	0.21	92.27	0.56	4.23	26		3
4	0.31	0.00	119	121	0.48	103.95	0.78	4.26	77		4
5	0.31	0.01	108	109	0.33	16.95	0.13	4.38	103		5
6	0.48	0.14	35	16	0.87	27.88	0.61	4.39	89		6
7	0.35	0.20	13	14	0.04	0.00	0.48	4.44	119		7
8	0.34	0.31	15	14	0.24	14.91	0.12	4.48	121		8
9	0.34	0.32	81	71	0.38	15.00	0.19	4.52	72		9
10	0.34	0.38	13	15	0.28	0.0	0.21	4.52	92		10
11	0.37	0.52	86	84	0.76	20.17	0.29	4.52	91		11
12	0.36	0.52	86	85	0.24	15.71	0.97	4.65	84		12
13	0.34	0.78	16	6	0.07	20.27	0.97	4.70	94		13
14	0.37	0.78	35	6	0.00	75.72	0.60	4.75	25		14
15	0.35	0.72	58	53	0.02	75.50	0.00	4.75	73		15
16	0.38	0.73	56	30	0.04	7.56	0.51	4.79	83		16
17	0.43	0.86	87	59	1.18	10.23	0.00	4.80	27		17
18	0.41	0.91	7	35	0.00	14.59	0.25	4.94	124		18
19	0.39	1.01	21	13	0.23	15.83	0.15	5.10	29		19
20	0.37	1.04	12	32	0.09	22.06	0.13	5.12	88		20
21	0.40	1.49	7	10	0.07	22.17	0.32	5.13	82		21
22	0.39	1.79	21	15	0.31	33.16	1.11	5.17	51		22
23	0.39	1.88	17	41	0.10	15.89	0.00	5.20	100		23
24	0.38	1.93	110	22	0.38	6.53	0.17	5.21	8		24
25	0.37	1.94	50	33	0.10	8.47	0.15	5.22	2		25
26	0.39	1.97	53	30	0.03	15.84	0.07	5.24	48		26
27	0.41	2.19	117	6	0.76	17.78	0.34	5.24	109		27
28	0.41	2.22	92	94	0.57	10.38	0.33	5.29	120		28
29	0.43	2.22	91	94	0.78	14.60	0.43	5.30	17		29
30	0.42	2.22	92	43	0.14	14.25	0.61	5.31	57		30
31	0.43	2.23	125	127	0.89	14.54	0.67	5.32	41		31
32	0.43	2.39	114	58	0.52	61.81	0.88	5.38	37		32
33	0.43	2.54	71	79	0.22	64.83	0.39	5.44	101		33
34	0.43	2.54	56	47	0.52	14.20	0.00	5.47	123		34
35	0.45	2.63	30	54	1.23	0.52	0.24	5.48	66		35
36	0.44	2.75	35	117	0.04	0.0	0.52	5.49	65		36
37	0.44	2.78	114	30	0.43	10.10	1.17	5.49	64		37
38	0.45	2.81	16	117	0.83	64.43	0.20	5.65	67		38
39	0.46	2.83	69	66	1.03	57.32	0.31	5.68	102		39
40	0.46	2.87	84	83	0.35	84.36	0.68	5.69	96		40
41	0.46	2.87	27	29	0.25	118.70	0.73	5.74	42		41
42	0.47	2.99	53	115	0.82	53.64	0.62	5.76	122		42
43	0.48	3.04	108	11	0.06	10.80	0.37	5.78	62		43
44	0.47	3.08	1	104	0.23	11.66	0.24	5.82	36		44
45	0.46	3.10	7	117	0.04	19.56	0.61	5.85	118		45
46	0.45	3.41	25	27	0.15	14.56	1.13	5.87	34		46
47	0.45	3.50	5	49	0.06	9.28	0.23	5.88	95		47
48	0.45	3.80	114	53	0.50	22.31	0.60	5.89	107		48
49	0.46	3.84	54	55	0.07	29.24	0.16	5.89	93		49
50	0.45	3.94	49	12	0.00	47.01	0.79	5.90	78		50
51	0.45	4.12	39	21	0.53	19.11	0.48	5.90	90		51
52	0.45	4.29	54	21	0.38	24.00	0.20	5.90	40		52
53	0.44	4.35	59	114	0.16	18.55	0.70	5.91	125		53
54	0.45	4.37	100	2	1.15	3.60	0.36	5.93	5		54
55	0.45	4.41	92	7	0.20	17.41	0.16	5.95	49		55
56	0.46	4.44	2	100	0.02	13.72	0.46	5.98	127		56
57	0.45	4.44	26	103	0.22	11.99	0.50	5.98	110		57

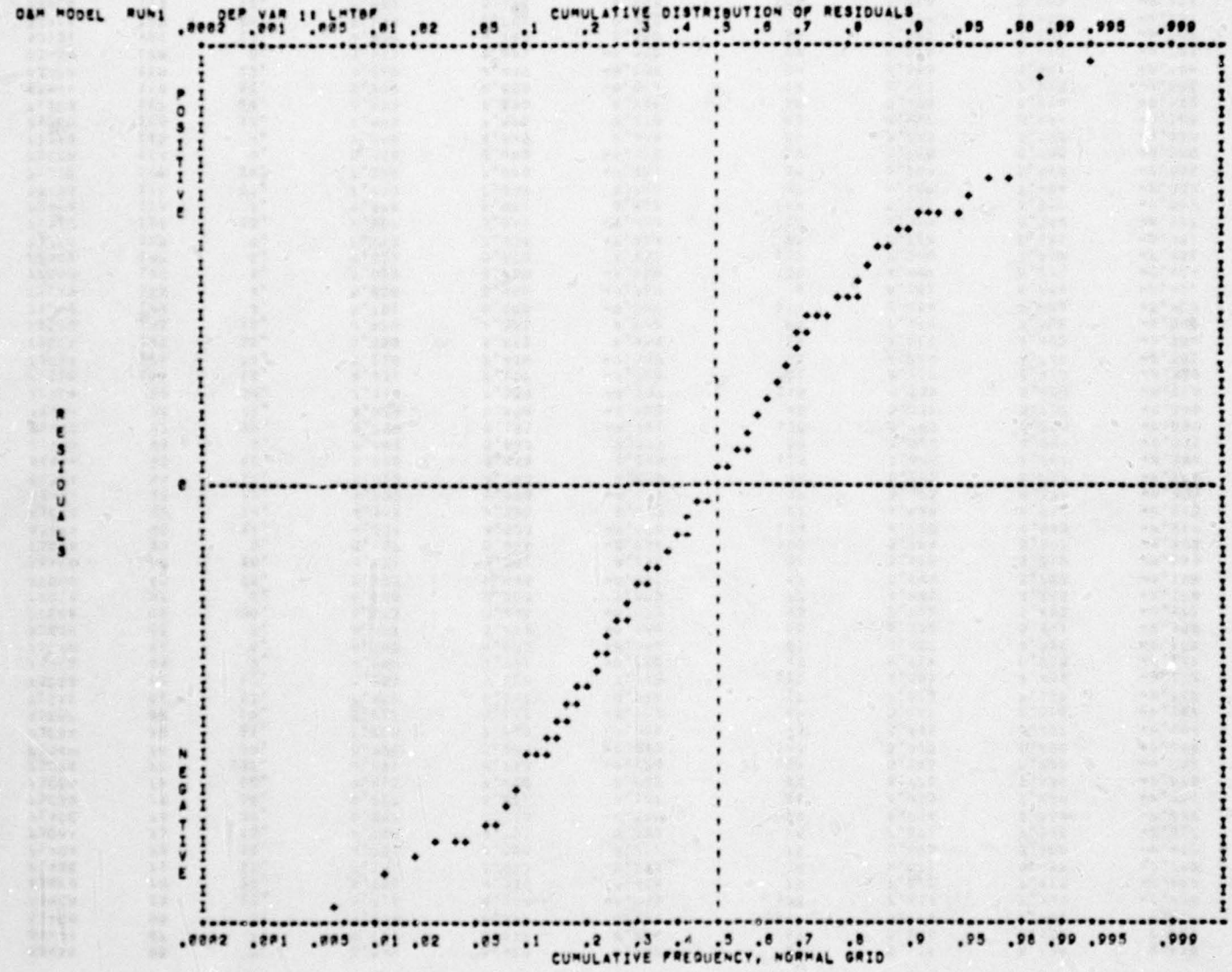
58	0.45	4.47	5	12	0.06	5.56	1.24	5.9A	12	58
59	0.45	4.49	39	13	0.50	10.85	0.79	5.98	185	59
60	0.45	4.51	59	58	0.68	2.22	0.14	5.99	52	60
61	0.45	4.51	22	35	0.29	6.74	0.54	5.99	43	61
62	0.45	4.56	85	55	0.87	14.25	1.02	6.01	32	62
63	0.45	4.72	53	54	0.38	31.17	0.49	6.01	22	63
64	0.45	5.04	16	59	0.28	186.44	0.25	6.02	196	64
65	0.44	5.10	37	65	0.09	87.94	0.43	6.05	18	65
66	0.46	5.11	49	103	1.27	186.25	0.21	6.06	44	66
67	0.45	5.14	66	53	0.36	15.10	0.26	6.10	97	67
68	0.45	5.15	6	59	0.27	3.98	0.23	6.23	1	68
69	0.45	5.16	71	55	0.19	7.39	1.11	6.26	104	69
70	0.45	5.32	48	17	0.29	19.79	1.17	6.26	87	70
71	0.45	5.42	58	33	0.45	14.17	0.28	6.28	69	71
72	0.45	5.43	55	13	0.16	26.87	0.29	6.32	126	72
73	0.44	5.48	194	59	0.87	9.63	1.04	6.32	59	73
74	0.45	5.56	12	195	1.28	9.89	0.88	6.38	68	74
75	0.47	5.58	30	115	1.74	2.39	0.52	6.40	114	75
76	0.47	5.68	190	116	0.27	5.42	0.85	6.42	58	76
77	0.47	5.70	12	43	0.62	6.11	0.94	6.46	33	77
78	0.47	5.72	37	66	0.32	1.97	0.93	6.47	53	78
79	0.47	5.73	195	43	0.65	13.78	1.14	6.49	38	79
80	0.48	5.94	187	98	1.23	9.91	0.61	6.51	45	80
81	0.48	6.05	115	39	0.28	6.22	0.51	6.55	115	81
82	0.48	6.11	33	53	0.64	23.69	0.48	6.57	54	82
83	0.48	6.22	115	54	0.51	22.87	0.58	6.58	18	83
84	0.48	6.27	55	15	0.12	18.59	1.21	6.58	85	84
85	0.48	6.33	114	33	0.34	4.12	0.53	6.79	39	85
86	0.47	6.53	8	2	0.17	5.16	0.19	6.82	21	86
87	0.47	6.56	11	116	0.68	29.87	0.31	6.82	55	87
88	0.47	6.58	43	196	0.01	15.12	0.47	6.86	81	88
89	0.47	6.72	78	16	0.92	0.38	0.28	6.92	13	89
90	0.47	6.88	35	78	0.25	18.97	0.19	6.94	15	90
91	0.48	6.83	33	115	1.86	37.78	0.34	6.95	71	91
92	0.49	6.83	185	32	1.19	38.67	0.38	6.95	46	92
93	0.49	7.05	68	58	0.36	23.05	0.17	6.98	14	93
94	0.50	7.09	1	87	1.34	11.23	0.18	7.01	79	94
95	0.50	7.14	66	67	0.42	35.29	0.29	7.18	9	95
96	0.51	7.37	34	197	1.35	71.66	0.55	7.19	19	96
97	0.51	7.39	194	87	1.11	25.79	1.19	7.24	74	97
98	0.51	7.47	198	7	0.54	23.33	0.54	7.33	111	98
99	0.51	7.49	9	56	0.19	37.48	0.82	7.38	56	99
100	0.51	7.56	83	27	0.51	38.81	0.59	7.43	76	100
101	0.50	7.57	33	38	0.99	18.84	0.53	7.46	188	101
102	0.51	7.67	117	59	1.83	12.72	1.49	7.49	47	102
103	0.52	7.84	33	45	1.85	11.99	1.35	7.53	11	103
104	0.52	7.88	68	33	1.21	15.69	0.66	7.56	99	104
105	0.52	7.92	79	8	0.85	36.26	0.22	7.58	116	105
106	0.52	8.04	53	45	0.21	39.59	0.33	7.61	38	106
107	0.53	8.29	11	128	1.23	11.83	0.93	7.69	128	107
108	0.53	8.34	88	8	0.32	15.14	1.18	7.75	22	108
109	0.52	8.47	2	48	0.15	23.79	0.84	7.96	112	109
110	0.52	8.48	79	74	0.66	24.43	0.18	8.03	75	110
111	0.52	8.58	7	79	0.96	8.91	0.78	8.08	7	111
112	0.52	8.69	8	48	0.32	6.68	0.95	8.31	35	112
113	0.52	8.81	56	11	0.97	6.72	0.92	8.33	79	113
114	0.52	8.86	1	69	0.17	2.81	0.83	8.56	16	114
115	0.52	8.74	43	32	0.54	2.19	0.76	8.63	117	115
116	0.52	8.86	194	89	0.06	18.49	0.41	8.78	6	116
117	0.52	8.99	112	35	0.81	17.86	0.58	8.86	98	117
118	0.52	9.01	112	7	0.81	25.68	0.55	8.92	38	118
119	0.52	9.17	17	37	0.49	0.0	0.82	9.05	88	119
120	0.52	9.26	95	187	0.23	22.37	0.32	9.05	66	120

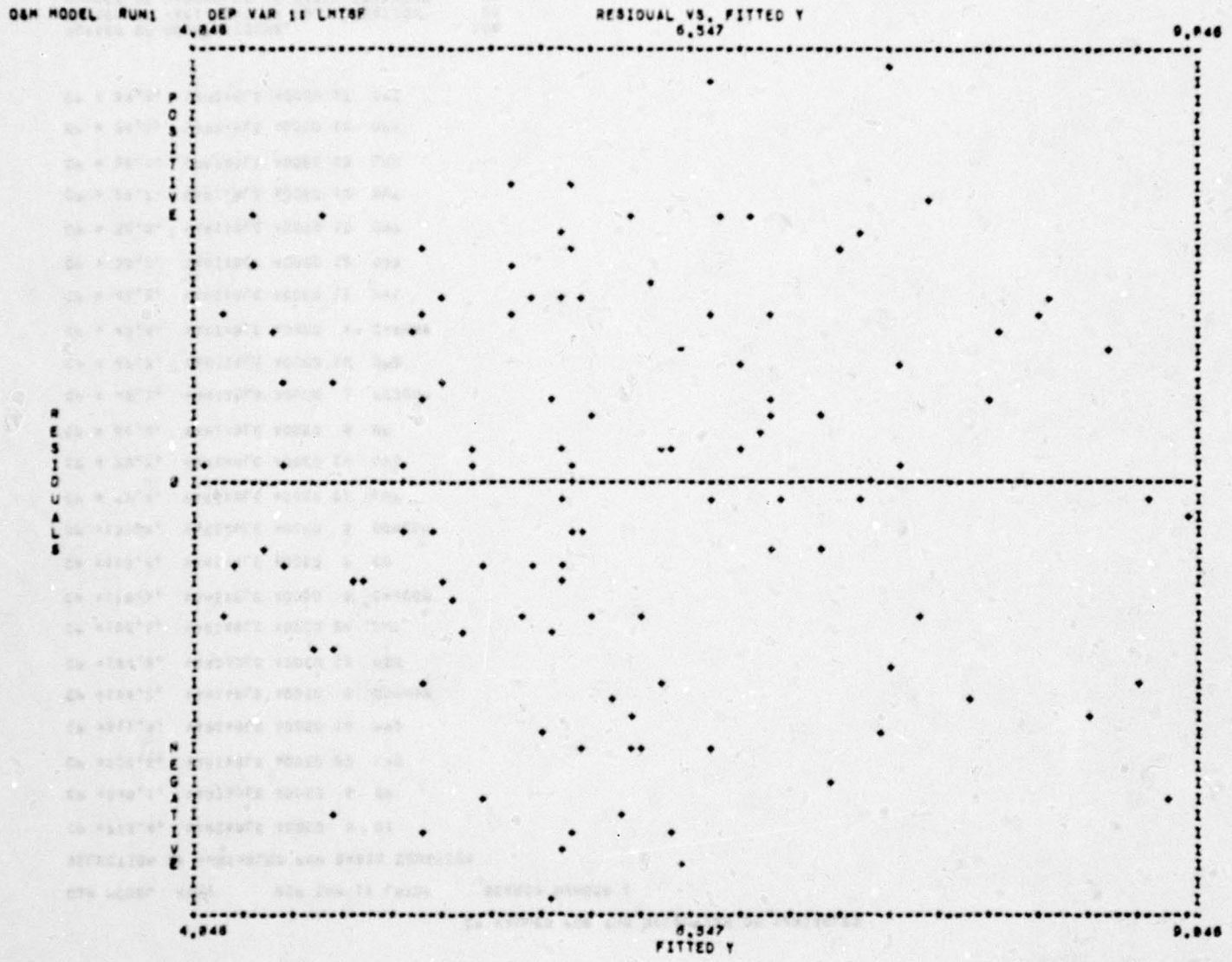
LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN1 DEP VAR IS LMTBF

IDENT.	OBSV.	HSS DISTANCE	ORDERED BY COMPUTER INPUT OBS. Y	FITTED Y	RESIDUAL	OBSV.	ORDERED BY RESIDUALS OBS. Y	FITTED Y	ORDERED RESID.	SEQ
71920	1	3.	5.496	6.233	-0.737	11	8.489	7.535	0.954	1
71L0A	2	6.	5.884	5.218	0.666	115	7.546	6.645	0.900	2
71P0A	5	4.	6.518	5.931	0.579	102	6.569	5.682	0.686	3
71710	6	23.	8.352	8.784	-0.432	127	6.638	5.961	0.677	4
724GA	7	16.	8.445	8.083	0.362	22	8.408	7.755	0.654	5
71G5A	8	4.	5.428	5.213	0.215	39	7.322	6.703	0.619	6
71FAA	9	14.	7.352	7.182	0.170	94	5.312	4.703	0.609	7
71F0A	10	11.	6.671	6.688	-0.009	103	4.970	4.361	0.609	8
71CAA	11	11.	8.489	7.535	0.954	87	6.866	6.263	0.603	9
71DAA	12	2.	6.496	5.975	0.521	81	7.452	6.862	0.590	10
51EAA	13	4.	7.937	6.919	0.118	76	8.911	7.420	0.582	11
52AAA	14	4.	7.141	6.981	0.160	5	6.518	5.931	0.579	12
52ABA	15	5.	7.348	6.941	0.407	48	5.775	5.241	0.534	13
638DA	16	24.	8.058	8.564	-0.507	111	7.853	7.338	0.523	14
71AEA	17	10.	5.542	5.301	0.242	12	6.496	5.975	0.521	15
74JAA	18	112.	6.284	6.052	0.151	49	6.468	5.952	0.517	16
74JCA	19	9.	7.973	7.192	0.118	67	8.131	7.648	0.483	17
52GA1	20	15.	5.422	6.814	-0.592	89	4.871	4.391	0.481	18
71ZAA	21	3.	6.944	6.817	0.087	68	6.834	6.377	0.456	19
71Z00	22	16.	8.408	7.755	0.654	122	6.194	5.761	0.432	20
73EPA	25	11.	4.388	4.749	-0.361	107	6.322	5.890	0.432	21
73MAA	26	26.	4.617	4.226	0.391	32	6.439	6.007	0.432	22
73MCA	27	4.	4.648	4.855	-0.215	78	8.751	8.333	0.418	23
73083	29	4.	5.137	5.898	0.239	41	5.738	5.321	0.417	24
733CA	30	5.	5.645	6.489	-0.844	15	7.348	6.941	0.406	25
73KEA	32	2.	6.439	6.007	0.432	26	4.617	4.226	0.391	26
73KFA	33	2.	5.700	6.455	-0.755	2	5.684	5.218	0.386	27
73KKA	34	6.	4.944	5.865	-0.921	54	7.259	6.874	0.386	28
7593P	35	21.	8.675	8.311	0.364	96	6.964	5.687	0.378	29
74B0A	36	7.	5.254	5.819	-0.566	35	8.675	8.311	0.364	30
749FA	37	5.	5.123	5.376	-0.253	7	8.445	8.083	0.362	31
74A10	38	28.	7.664	7.612	0.052	121	4.836	4.484	0.352	32
78A1A	39	3.	7.322	6.703	0.619	81	5.515	5.172	0.343	33
78GA0	40	16.	5.987	5.903	0.083	117	8.953	8.628	0.325	34
74FF0	41	17.	5.738	5.321	0.417	45	6.808	6.514	0.294	35
74FA0	42	62.	5.438	5.738	-0.300	55	7.108	6.819	0.281	36
74FH0	43	7.	5.883	5.987	-0.104	116	7.854	7.583	0.272	37
74FU0	44	45.	5.782	6.057	-0.275	17	5.542	5.301	0.242	38
73CR0	45	7.	6.808	6.514	0.294	73	4.990	4.751	0.239	39
73CG0	46	21.	6.818	6.955	-0.137	72	4.751	4.524	0.227	40
658H0	47	4.	6.960	7.494	-0.534	6	5.428	5.213	0.215	41
74FC0	48	4.	5.775	5.241	0.534	71	7.161	6.953	0.208	42
74FJ0	49	5.	6.468	5.950	0.517	95	6.985	5.880	0.206	43
74FK0	50	19.	6.220	6.923	-0.703	75	8.217	8.031	0.187	44
74FQ0	51	24.	5.515	5.172	0.343	9	7.352	7.182	0.170	45
74KA0	52	13.	6.826	5.986	0.840	14	7.141	6.981	0.160	46
74KC0	53	4.	6.553	6.472	0.082	16	6.284	6.052	0.151	47
74CA0	54	5.	7.259	6.874	0.386	13	7.937	6.919	0.118	48
74C90	55	6.	7.108	6.819	0.291	58	6.516	6.417	0.099	49
74CC0	56	6.	7.371	7.388	-0.017	21	6.994	6.617	0.087	50
74FA1	57	25.	5.128	5.312	-0.192	42	5.987	5.903	0.083	51
74E40	58	3.	6.516	6.417	0.099	53	6.553	6.472	0.082	52
73FH2	59	2.	5.743	6.323	-0.580	66	5.542	5.475	0.067	53
73FB0	60	29.	3.944	4.224	-0.281	81	4.114	4.048	0.066	54
73F00	61	46.	4.114	4.048	0.066	123	5.534	5.471	0.063	55
73FF0	62	17.	5.589	5.789	-0.198	38	7.664	7.612	0.052	56
71NA0	64	6.	4.893	5.491	-0.688	92	4.566	4.525	0.042	57
710U0	65	6.	5.322	5.491	-0.169	52	6.996	5.988	0.040	58

63AA3	55	5.	5.542	5.475	0.057	29	5.137	5.098	0.039	59
65AAA	67	7.	6.131	5.648	0.483	82	5.153	5.129	0.023	60
63AG9	68	6.	6.834	6.377	0.458	119	5.976	5.961	0.017	61
63HCA	69	12.	5.716	6.285	-0.569	106	7.452	7.456	-0.004	62
638F8	70	29.	8.751	8.333	0.418	79	7.085	7.015	-0.029	63
71ABE	71	13.	7.161	6.953	0.208	10	6.671	6.680	-0.009	64
71ADA	72	16.	4.751	4.524	0.227	78	5.090	5.099	-0.010	65
73D8A	73	73.	4.990	4.751	0.239	56	7.371	7.388	-0.017	66
71ACC	74	36.	6.567	7.235	-0.668	98	6.838	6.860	-0.022	67
73C8Q	75	58.	8.217	8.031	0.187	88	8.995	9.046	-0.051	68
73CEN	76	32.	8.811	7.429	0.582	86	8.973	9.046	-0.073	69
73CP4	77	127.	4.891	4.285	-0.174	128	5.193	5.285	-0.092	70
73DAM	78	32.	5.890	5.990	-0.010	106	5.922	6.020	-0.098	71
73EBA	79	21.	7.885	7.815	-0.009	43	5.883	5.987	-0.104	72
73ERF	80	10.	5.987	5.116	-0.109	80	5.987	5.116	-0.109	73
71C48	81	13.	7.452	6.862	0.590	19	7.873	7.192	-0.119	74
73EG2	82	12.	5.153	5.129	0.023	119	4.389	4.439	-0.132	75
73MC8	83	9.	4.869	4.791	-0.722	46	6.818	6.955	-0.137	76
73LAP	84	8.	4.288	4.652	-0.364	91	4.357	4.525	-0.168	77
77EC8	85	5.	6.897	6.684	-0.586	65	5.322	5.491	-0.169	78
77EEP	86	28.	8.973	9.046	-0.073	93	5.722	5.893	-0.171	79
77DCA	87	3.	6.866	6.263	0.603	77	4.991	4.265	-0.174	80
77D8P	88	28.	8.995	9.046	-0.051	62	5.589	5.782	-0.192	81
76AEA	89	26.	4.871	4.391	0.481	57	5.120	5.312	-0.192	82
73KA8	90	5.	5.187	5.983	-0.796	125	5.794	5.997	-0.203	83
638AA	91	14.	4.357	4.525	-0.168	124	4.726	4.940	-0.214	84
63CAA	92	14.	4.566	4.525	0.042	27	4.648	4.855	-0.215	85
65HAA	93	12.	5.722	5.893	-0.171	37	5.123	5.376	-0.253	86
61986	94	13.	5.312	4.703	0.609	44	5.782	6.057	-0.275	87
61AA9	95	10.	8.845	5.848	0.226	128	7.496	7.687	-0.280	88
61A9E	96	9.	5.964	5.587	0.378	68	3.944	4.224	-0.281	89
61AC8	97	22.	5.788	6.181	-0.481	126	6.885	6.296	-0.291	90
72AA9	98	47.	8.838	8.860	-0.022	42	5.438	5.738	-0.300	91
72AC8	99	32.	7.164	7.556	-0.392	118	5.539	5.853	-0.314	92
71CA8	100	13.	4.431	5.197	-0.766	101	5.119	5.439	-0.320	93
72EAA	101	70.	5.118	5.439	-0.320	25	4.388	4.749	-0.361	94
72EC4	102	36.	6.369	5.882	0.486	84	4.288	4.652	-0.364	95
726P0	103	18.	4.978	4.361	0.609	99	7.164	7.556	-0.392	96
71JA9	104	4.	5.751	6.260	-0.509	114	5.984	6.402	-0.418	97
71LA9	105	4.	5.226	5.980	-0.755	9	8.352	8.784	-0.432	98
72DN9	106	8.	5.922	6.820	-0.898	109	4.807	5.241	-0.434	99
72AC8	107	5.	6.322	5.890	0.432	112	7.589	7.968	-0.451	100
71718	108	9.	7.452	7.456	-0.004	97	5.799	6.181	-0.481	101
71310	109	13.	4.807	5.241	-0.434	16	8.958	8.564	-0.387	102
72PP2	110	9.	5.978	5.941	0.017	104	5.751	6.260	-0.509	103
72HB8	111	17.	7.853	7.330	0.523	47	6.968	7.494	-0.534	104
71JCE	112	28.	7.549	7.988	-0.451	35	5.264	5.819	-0.556	105
72CC8	114	4.	5.994	6.402	-0.418	69	5.716	6.285	-0.569	106
71Z48	115	4.	7.545	6.845	0.998	59	5.743	6.323	-0.583	107
71ZHP	116	17.	7.854	7.583	0.270	85	6.097	6.684	-0.586	108
71Z08	117	24.	8.953	8.628	0.325	28	5.422	6.014	-0.592	109
65BAA	118	12.	5.539	5.853	-0.314	74	6.567	7.235	-0.668	110
63AF9	119	13.	4.329	4.439	-0.139	64	4.893	5.491	-0.598	111
63AA9	120	8.	5.193	5.285	-0.092	58	8.220	8.923	-0.703	112
63121	121	13.	4.836	4.484	0.352	83	4.069	4.791	-0.722	113
63AAA	122	28.	6.194	5.761	0.432	1	5.496	6.233	-0.737	114
55AL8	123	12.	5.534	5.471	0.063	105	5.226	5.980	-0.755	115
55AV8	124	12.	4.726	4.940	-0.214	33	5.798	6.455	-0.755	116
61AA9	125	18.	5.794	5.987	-0.203	100	4.431	5.197	-0.766	117
61AE8	126	21.	8.885	6.296	-0.291	98	5.187	5.983	-0.796	118
62AA8	127	8.	6.638	5.961	0.677	39	5.645	6.489	-0.844	119
64211	128	22.	7.486	7.687	-0.200	34	4.944	5.865	-0.921	120


O&M MODEL RUN1
DEP VAR IS LNTOP
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID


O&M MODEL RUN1 DEP VAR IS LNTSF
RESIDUAL VS. FITTED Y
4.848
6.547
8.246
POSITIVE
0
NEGATIVE
RESIDUALS
4.848
6.547
8.246
FITTED Y

CP VALUES FOR THE SELECTION OF VARIABLES

O&M MODEL RUN1 DEP VAR 11 LMTBF SEARCH NUMBER 1

SELECTION OF VARIABLES FOR BASIC EQUATION

CP =718.4, VARIABLE ADDED 8 DI

CP =649.1, VARIABLE ADDED 9 EM

CP =239.3, VARIABLE ADDED 22 LVO

CP =211.9, VARIABLE ADDED 10 MVO

CP =194.7, VARIABLE ADDED 2 BOMNAV

CP =194.0, VARIABLE ADDED 12 MSS

CP =188.3, VARIABLE ADDED 20 DUF

CP =179.9, VARIABLE ADDED 5 CARCOM

CP =153.4, VARIABLE ADDED 7 CD

CP =135.4, VARIABLE ADDED 3 BOMCOM

CP = 72.4, VARIABLE ADDED 21 LUP

CP = 70.7, VARIABLE ADDED 14 OVO

CP = 61.4, VARIABLE ADDED 6 UP

CP = 49.1, VARIABLE ADDED 1 FIGCOM

CP = 47.5, VARIABLE ADDED 19 OPO

CP = 46.4, VARIABLE ADDED 4 CARNAV

CP = 44.2, VARIABLE ADDED 11 MWT

CP = 33.2, VARIABLE ADDED 18 OSS

CP = 32.8, VARIABLE ADDED 15 OWT

CP = 29.7, VARIABLE ADDED 13 MUF

CP = 28.1, VARIABLE ADDED 23 LPO

CP = 24.3, VARIABLE ADDED 16 OPS

CP = 24.8, VARIABLE ADDED 17 OXT

NUMBER OF OBSERVATIONS 129
NUMBER OF VARIABLES IN FULL EQUATION 23
NUMBER OF VARIABLES IN BASIC EQUATION 21
REMAINDER OF VARIABLES TO BE SEARCHED 2

```
EQUATION  P   CP    VARIABLES IN EQUATION

          24  24,0  FULL EQUATION
          22  24,3  BASIC SET OF VARIABLES   FIGCOM 1  BOMNAV 2  BOMCOM 3  CARNAV 4  CARCOM 5  UP 6  CO 7  DI 8  EM 9  MVO 10
                                              MWT 11  MSS 12  MUF 13  DVO 14  DWT 15  DSS 16  DPD 19  DUF 20  LUP 21  LVD 22  LPD 23
                    RMS =    0,23148

      1   23  24,3  BASIC SET PLUS DPS 18
                    RMS =    0,22921

      2   24  24,0  BASIC SET PLUS DPS 18  DXT 17
                    RMS =    0,22616

      3   23  25,1  BASIC SET PLUS DXT 17
                    RMS =    0,23186

SWEEP NUMBER          3,  DELTA Z(K,K) =  1,0-17

ESTIMATE OF VARIANCE

NO SMALLER RMS VALUE FOUND IN SUBSET EQUATIONS

RMS OF FULL EQUATION SELECTED BY USER TO CALCULATE CP VALUES


 SEQ  EQUATION  P  ORDERED CP
   1        2  24     24,0
   2        1  23     24,3
   3        3  23     25,1
```

SUMS OF VARIABLES

7,000000 00 1,400000 01 9,000000 00 1,700000 01 1,100000 01 4,753460 00 1,562500 02 3,024200 03 1,056000 03 1,600000 01
9,210000 00-1,800000 00-1,400000-01 7,156470 00 2,559730 05 2,346400 05 1,833210 05 2,381330 05 7,458820 07 4,116340 01
1,117750 03 7,894580 02 5,944930 02 6,899960 02

RESIDUAL SUMS OF SQUARES + CROSS PRODUCTS

1 6,991670 00
2 -8,166670-01 1,933470 01
3 -5,250000-01-1,050000 00 8,325000 00
4 -9,916670-01-1,983330 00-1,275000 00 1,459170 01
5 -8,416670-01-1,283330 00-8,250000-01-1,558330 00 9,991670 00
6 -2,232350 05-2,709570 05-2,666760 05-2,883640 05-2,386560 05 7,191970 11
7 2,829240 02-4,761960 02-2,244980 02-4,785780-01 2,835490 00 1,917780 06 1,863240 02
8 2,449830 01-2,181230 02-2,268150 02-6,142830 01-8,911830 01 1,167590 08 2,196240 03 1,695900 05
9 -5,993580 01 6,283800 01-4,624590 01-2,868580 01-9,585590 01-1,934250 07-1,985760 03-2,314810 04 6,945390 04
10 -3,963930 03 6,929130 03-3,242280 03 1,811730 03-3,861470 03 3,429490 05-5,886440 04-4,186180 05-3,836140 05 2,817470 08
11 -7,383720 01 4,152580 01-6,887860 01 2,193520 01-4,964430 01 1,878890 06-6,341290 02 3,222230 02-5,835110 03 4,838490 06
1,178630 05
12 1,365950 02-3,991980 02-1,165980 03-2,419450 02 7,165590 01 6,429810 07 2,158880 03 6,119590 04-6,865690 04-9,678970 05
-1,588970 04 1,531790 05
13 3,998170 05-6,233670 05-3,859580 05-8,998170 05-5,817170 05 2,441870 05 5,887490 05 6,924330 02-9,818530 01-3,498210 03
-1,198540 02 5,355890 02 4,117480 01
14 4,212490 06 2,805340 07-4,211210 05 1,986830 06-6,199610 06-1,356310 13 1,389180 07-3,322290 09 3,252820 08 3,113530 08
-9,629950 09 4,926350 08-4,473350 08 1,831170 15
15 -1,582960 01 8,226810 02-9,532860 02-6,997830 03-3,897290 03-2,986630 09 3,618450 04-5,875690 05 4,189640 05-5,769380 07
2,319580 04 9,629510 05 1,226660 04 3,578770 11 3,575940 08
16 -2,117310 03 1,634250 03-1,231250 03 2,886460 03-2,484590 03-1,758830 08-1,334170 02-3,349180 05 6,981710 04-1,958570 07
1,182830 05-3,591940 05-3,632820 03-2,521970 10 3,734570 06 2,319380 07
17 -4,155180 03 5,856870 02-4,886580 03-2,458610 03-6,985430 03 1,382310 09 8,196960 02 4,477660 05 2,689890 05-7,319560 06
2,253550 05 5,231950 05 5,824810 03-2,684180 10 4,887290 07-2,197530 06 5,499480 07
18 6,629340 02-8,752490 01-9,791790 03 1,398780 03-3,833530 02 4,852610 08 1,724580 04 4,921860 05 3,594570 05-2,898460 07
-2,363950 05-5,431110 03-3,214990 03-3,319830 10 1,587590 07-4,888850 06 9,767930 06 5,213470 07
19 9,134690 05 1,799990 05 3,963940 04-2,493960 06-1,712480 05-4,345840 11-1,478260 06-2,214850 08-2,159550 07-3,195940 09
-8,392640 07 2,319330 08 5,341040 05 4,122780 13 3,585690 10-2,117880 09 5,572820 09 2,566290 09 2,131220 13
20 -4,755580-02-2,335130 00-1,581150 00-1,237510 03-8,887450-01-2,877910 04 1,597490 08 3,859230 02-2,662860 01 7,562260 02
7,259910 01 1,932770 02 1,717970 00-1,482680 07-2,849560 03 5,854530 02 5,481620 03 1,764770 03-1,399960 06 1,182890 01
21 -3,928510 00-1,414830 01-5,943590 00-9,746990 00-3,777670 00 1,191890 07 2,788380 01 2,995190 03-4,915460 02 9,744420 04
2,737970 03 2,888870 03 2,437780 01-3,268780 06-6,815340 04-1,873390 04 2,448460 04 2,664410 02-1,158490 07 9,883250 08
3,389780 02
22 -2,595780 00-1,598170 00-4,192330 00 1,489810-01-4,327890-01 3,821270 06-3,276780 01 5,177930 02-2,393620 02 1,650970 05
3,359740 03-3,978750 02 1,654650 00-2,685840 06-1,182660 05-5,598910 03-8,248550 03-1,323260 04-1,415450 07 3,834650 08
1,345910 02 1,669450 02
23 -6,329180 00-9,712190 00-2,948210 00 4,588970 00-8,453490-01 4,358880 06-1,343470 01 6,178140 02 4,868570 01 1,112560 05
3,818660 03-7,665790 02-8,919510 00-3,238920 06-1,181280 05 9,877180 03-8,286750 02-1,184740 04-3,114980 07 5,758360 08
1,378810 02 1,413330 02 2,539740 02
24 -9,582890-01-3,143150 00-1,644950 00 3,859960 02-4,394550 06-4,525320 06-1,552680 01-2,266330 02 1,123220 03-9,968410 04
-2,586650 03-3,864540 02 5,229880 00 2,453380 06 1,876570 05 5,772940 03 1,374960 04 2,414940 04 1,171820 07-4,499850 08
-1,851180 02-1,296360 02-1,192490 02 1,748360 02

MEANS OF VARIABLES

5,833330-02 1,166670-01 7,500000-02 1,416670-01 9,166670-02 3,961230 04 1,302990 00 2,526170 01 8,805000 00 1,333330-01
7,875000-02-1,583330-02-1,166670-03 5,963730 06 2,133110 03 1,955340 03 1,527670 03 1,917770 03 6,915820 05 3,431950-01
9,314610 00 4,579560 00 4,954110 00 5,749140 00

ROOT MEAN SQUARES OF VARIABLES

2,383550-01 3,223690-01 2,644960-01 3,581790-01 2,897650-01 7,773620 04 1,251390 00 3,774090 01 2,415880 01 1,483990 03
3,136440 01 3,587680 01 5,882180-01 3,922750 06 1,733490 03 4,486240 02 6,792280 02 6,618960 02 4,231950 05 3,152780-01
1,867730 00 1,184440 00 1,468990 00 1,299330 00

SIMPLE CORRELATION COEFFICIENTS, R(I,I PRIME)

1	1.000									
2	-0.990	1.000								
3	-0.971	-0.143	1.000							
4	-0.141	-0.148	-0.116	1.000						
5	-0.979	-0.115	-0.998	-0.129	1.000					
6	-0.193	-0.991	-0.118	-0.862	-0.786	1.000				
7	0.961	-0.999	-0.957	-0.999	0.947	0.185	1.000			
8	0.923	-0.151	-0.191	-0.839	-0.968	0.334	0.391	1.000		
9	-0.967	0.965	-0.961	-0.828	-0.115	-0.946	-0.382	-0.213	1.000	
10	-0.995	0.122	-0.969	0.829	-0.988	0.258	-0.267	-0.992	-0.871	1.000
11	-0.984	0.935	-0.961	0.917	-0.946	0.369	-0.136	0.892	-0.665	0.730
	1.000									
12	0.136	-0.290	-0.981	-0.162	0.958	0.194	0.484	0.368	-0.588	-0.193
	-0.119	1.000								
13	0.243	-0.266	-0.298	-0.387	-0.287	0.845	0.866	0.282	-0.958	-0.834
	-0.953	0.253	1.000							
14	0.938	0.192	-0.883	0.812	-0.846	-0.374	0.922	-0.189	0.829	0.888
	-0.385	0.929	-0.918	1.000						
15	-0.994	0.912	-0.917	-0.884	-0.965	-0.125	0.148	-0.985	0.882	-0.188
	0.994	0.139	0.191	0.442	1.000					
16	-0.172	0.997	-0.969	0.157	-0.158	-0.943	-0.992	-0.169	0.954	-0.136
	0.967	-0.185	-0.118	-0.123	0.941	1.000				
17	-0.218	0.923	-0.219	-0.987	-0.795	0.229	0.998	0.147	0.137	-0.861
	0.989	0.188	0.122	-0.985	0.328	-0.962	1.000			
18	0.936	-0.893	-0.134	0.951	-0.817	0.974	0.175	0.166	0.189	-0.178
	-0.998	-0.992	-0.969	-0.187	0.116	-0.115	0.183	1.000		
19	0.977	0.185	0.993	-0.141	-0.912	-0.112	-0.923	-0.117	-0.918	-0.843
	-0.953	0.198	0.918	0.289	0.411	-0.995	0.183	0.977	1.000	
20	-0.945	-0.193	-0.151	-0.994	-0.974	-0.999	0.934	0.216	-0.929	0.914
	0.992	0.144	0.978	-0.181	-0.944	0.835	0.212	0.972	-0.988	1.000
21	-0.994	-0.221	-0.181	-0.148	-0.986	0.714	0.189	0.488	-0.984	0.331
	0.448	0.378	0.175	-0.419	-0.192	-0.123	0.181	0.992	-0.138	0.144
	1.000									
22	-0.978	-0.935	-0.112	0.983	-0.911	0.358	-0.186	0.997	-0.978	0.789
	0.737	-0.979	0.928	-0.486	-0.483	-0.998	-0.986	-0.142	-0.237	0.968
	0.573	1.000								
23	-0.155	-0.173	-0.984	0.974	-0.917	0.323	-0.962	0.994	0.918	0.432
	0.554	-0.123	-0.987	-0.475	-0.392	0.125	-0.827	-0.193	-0.423	0.185
	0.475	0.988	1.000							
24	-0.928	-0.968	-0.943	0.861	-0.185	-0.425	-0.886	-0.842	0.323	-0.467
	-0.574	-0.959	0.862	0.435	0.432	0.891	0.141	0.254	0.192	-0.998
	-0.587	-0.788	-0.587	1.000						

INVERSE, C(I,I PRIME)

1	1.432									
2	0.197	2.158								
3	0.485	0.847	2.172							
4	0.282	1.193	1.869	2.218						
5	0.551	0.911	1.296	1.188	2.364					
6	0.258	0.245	0.484	0.345	0.372	2.828				
7	-0.028	-0.026	0.029	0.018	-0.004	-0.127	1.556			
8	0.117	-0.168	0.158	-0.182	0.072	-0.248	-0.439	1.728		
9	-0.118	0.411	0.061	0.336	0.095	0.083	0.288	0.134	2.466	
10	0.083	-0.119	-1.894	-0.479	-0.541	-1.788	0.698	0.896	0.948	11.511
11	-0.462	-0.426	-0.168	-0.172	-0.133	-0.163	-0.288	0.188	0.423	-4.845
	0.495									
12	-0.418	0.579	-0.386	0.177	-0.369	0.298	-0.292	-0.148	2.849	1.135
	0.581	3.769								
13	0.228	1.281	1.273	1.924	1.478	0.528	0.972	-0.345	0.188	-0.719
	0.291	-0.884	2.739							
14	0.281	-0.222	1.885	0.315	0.897	1.157	-0.348	0.189	-0.887	-0.487
	2.983	-1.958	0.738	5.987						
15	0.899	0.335	-0.894	0.858	-0.221	0.243	-0.165	-0.959	-0.324	1.188
	-3.183	-0.175	-0.413	-1.815	3.599					
16	0.432	-0.244	0.591	0.888	0.658	0.848	-0.878	0.297	-0.869	-0.848
	-0.384	-0.157	0.264	0.884	-0.184	1.623				
17	0.795	-0.822	0.897	0.367	1.843	-0.868	0.157	0.866	-0.512	-0.888
	0.819	-0.948	0.499	1.288	-0.728	0.641	2.322			
18	-0.813	0.887	0.293	0.812	0.185	0.918	-0.244	-0.128	-0.378	-0.536
	0.278	-0.127	0.328	0.745	-0.266	0.299	0.882	1.345		
19	-0.825	0.117	0.251	0.317	0.228	0.244	0.864	0.188	0.818	-0.748
	0.154	-0.219	0.366	0.559	-0.536	0.788	0.887	0.883	1.548	
20	0.829	0.545	0.415	0.584	0.348	0.523	0.861	-0.285	0.849	-0.389
	-0.248	-0.866	0.468	0.148	0.282	-0.895	-0.194	-0.844	0.178	1.373
21	0.268	0.835	-0.131	0.189	0.124	-2.198	0.854	-0.315	-0.949	1.374
	-0.328	-1.898	-0.178	-0.467	-0.199	0.128	0.191	0.869	-0.123	-0.247
	4.584									
22	0.413	0.893	1.655	0.568	0.893	2.471	-0.222	-0.812	-0.864	-0.583
	-0.912	-1.883	0.384	5.429	1.763	1.886	1.453	0.568	0.418	0.557
	-2.898	15.181								
23	0.891	0.728	0.158	0.342	0.213	0.137	-0.147	-0.837	0.188	0.846
	-0.788	0.536	0.574	-0.378	0.331	-0.333	-0.315	0.946	0.623	0.138
	-0.437	-1.758	2.818							

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

Q&M MODEL RUN2 DEP VAR IS LMTBMA MIN Y = 3.4810 00 MAX Y = 8.9270 00 RANGE Y = 5.4460 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPOS" MODEL
LMTBMA = B(0) + B(1)FIGCOM + B(2)BOMNAV + B(3)BOMCOM + B(4)CARNAV
+ B(5)CARCOM + B(6)UP + B(7)CD + B(8)DI + B(9)EM
+ B(10)MVO + B(11)MWT + B(12)MSS + B(13)MUF + B(14)DVO
+ B(15)DWT + B(16)DPS + B(17)DXT + B(18)DSS + B(19)DPO
+ B(20)DUP + B(21)LUP + B(22)LVO + B(23)LPO
LMTBMA = LN(MTBMA)
MTBMA = MEAN OPERATING TIME BETWEEN MAINTENANCE ACTIONS

IND.VAR(I)	NAME	COEF.B(I)	S.E. COEF.	T-VALUE	R(I)BOMD	MIN X(I)	MAX X(I)	RANGE X(I)	REL.IMP.X(I)
0		1.479770 P1							
1	FIGCOM	-7.957250-01	2.220-01	3.5	P.3416	P.P	1.PPPD PP	1.PPPD PP	P.14
2	BOMNAV	-1.171P90 PP	1.990-01	5.9	P.5366	P.P	1.PPPD PP	1.PPPD PP	P.22
3	BOMCOM	-1.183910 PP	2.430-P1	4.9	P.5397	P.P	1.PPPD PP	1.PPPD PP	P.22
4	CARNAV	-5.714540-P1	1.850-P1	3.1	P.5474	P.P	1.PPPD PP	1.PPPD PP	P.18
5	CARCOM	-1.877550 PP	2.310-P1	4.6	P.5779	P.P	1.PPPD PP	1.PPPD PP	P.29
6	UP	+2.918240-P6	P.430-P7	3.P	P.6414	1.53PD P2	P.6690 P5	P.6630 P5	P.29
7	CD	-2.P98740-P1	4.340-P2	4.6	P.3575	4.9230-P3	P.6740 P0	P.6690 P0	P.25
8	DI	P.P27710-P3	1.520-P3	5.5	P.4211	P.P	1.PPPD P2	1.PPPD P2	P.15
9	EM	1.P293P0-P2	2.P30-P3	6.5	P.5945	P.P	1.PPPD P2	1.PPPD P2	P.34
10	MVO	5.551PP0-P4	P.970-P5	5.6	P.2131	-1.2510 P3	P.1790 P3	P.17PD P3	P.03
11	MWT	-1.155540-P2	3.540-P3	3.3	P.8468	-3.P2P0 P1	1.4250 P2	1.7270 P2	P.37
12	MSS	1.128750-P2	2.360-P3	4.8	P.7341	-7.9PP0 P1	2.1PPP P1	1.PPPD P2	P.21
13	MUF	-3.73P560-P1	1.730-P1	3.P	P.63P3	-1.43PD PP	1.3700 P0	2.8PP0 P0	P.19
14	DVO	-1.82P320-P7	2.710-P8	3.P	P.8324	P.3P4D P3	P.4740 P7	P.4740 P7	P.46
15	DWT	1.358630-P4	4.770-P5	P.P	P.7221	3.6P4D P0	1.1750 P4	1.1750 P4	P.29
16	DPS	P.214120-P4	1.2P0-P4	1.P	P.3P39	3.8690 P1	P.9690 P3	P.9290 P3	P.12
17	DXT	-1.714950-P4	P.780-P5	1.P	P.5494	P.9690 P2	3.3370 P3	3.P410 P3	P.19
18	DSS	P.1174P0-P4	7.640-P5	P.P	P.2568	1.34P0 P1	P.8790 P3	P.8660 P3	P.11
19	DPO	-3.133P90-P7	1.2P0-P7	P.4	P.3539	P.25P0 P2	4.1P10 P5	4.1P00 P5	P.24
20	DUP	-7.721780-P1	1.520-P1	4.P	P.2717	1.7640-P1	P.2160 P2	1.8420 P0	P.26
21	LUP	-2.692290-P1	5.650-P2	4.P	P.7P65	5.P3P0 P0	1.3950 P1	P.2170 P0	P.41
22	LVO	-P.P87240-P1	1.430-P1	P.P	P.9338	3.4P10 P0	P.P12D P0	P.9110 P0	P.03
23	LPO	-1.P61250-P1	P.180-P2	P.1	P.6574	1.0990 P0	P.9P0D P0	P.9P0D P0	P.13

NO. OF OBSERVATIONS	129
NO. OF IND. VARIABLES	23
RESIDUAL DEGREES OF FREEDOM	96
F-VALUE	29.3
RESIDUAL ROOT MEAN SQUARE	P.47534826
RESIDUAL MEAN SQUARE	P.22595597
RESIDUAL SUM OF SQUARES	21.69177282
TOTAL SUM OF SQUARES	174.83554912
MULT. CORREL. COEF. SQUARED	.8784

REQUIRED X(I) PRECISION
(DIGIT RIGHT OF DECIMAL POSITIVE,
LEFT OF DECIMAL NEGATIVE)

IND.VAR(I)	DIGIT
1	-1
2	-1
3	-1
4	-1
5	-1
6	-8
7	1
8	-2
9	-2
10	-3
11	-2
12	-2
13	1
14	-7
15	-4
16	-3
17	-4
18	-4
19	-6
20	1
21	1
22	1
23	1

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN2 DEP VAR 1: LMTBMA

COMPONENT EFFECT OF EACH VARIABLE ON EACH OBSERVATION (IN UNITS OF Y)
(VARIABLES ORDERED BY THEIR RELATIVE INFLUENCE --- OBSERVATIONS ORDERED BY INFLUENCE OF MOST INFLUENTIAL VARIABLE)

SEQ.	OBSV.	VARIABLES													
		18	22	14	21	11	9	6	15	20	7	19	3	2	12
		5	13	8	1	23	16	10	4	17					
		RVO	LVO	DVO	LUP	MMT	EM	UP	CWT	DUF	CO	DPO	BOMCOM	BOMNAV	MSS
		CARCOM	MUF	DI	FIGCOM	LPO	OPS	OBS	CARNAV	DXT					
1	77	3.94	-1.95	-1.92	-0.14	-1.90	-0.16	0.06	0.09	0.13	0.25	-0.02	0.09	-1.03	-0.14
		0.10	0.16	-0.20	0.05	-0.01	0.03	-0.37	0.08	0.21					
2	10	3.75	-1.94	-1.75	-0.26	0.11	-0.16	0.03	-0.03	0.01	0.26	-0.06	0.09	0.14	0.22
		0.10	-0.21	-0.20	0.05	0.07	-0.42	0.02	0.08	-0.04					
3	73	2.00	-1.77	-0.47	0.17	-0.68	-0.16	0.09	-0.21	0.13	0.25	0.06	0.09	-1.03	-0.61
		0.10	0.16	-0.20	0.05	-0.26	0.03	-0.23	0.08	0.21					
4	101	2.00	-1.77	-0.47	0.30	-0.05	-0.16	0.10	-0.22	0.06	0.25	0.06	0.09	0.14	-0.61
		0.10	0.20	-0.20	0.05	-0.26	0.03	-0.23	-0.49	0.21					
5	42	2.25	-1.61	0.16	-0.71	-1.65	-0.16	-0.33	1.30	0.01	0.20	0.04	0.09	0.14	0.23
		0.10	-0.21	-0.20	0.05	-0.07	0.03	0.03	0.08	-0.31					
6	102	1.04	-1.43	0.50	0.45	-0.37	-0.16	0.11	-0.29	0.06	0.06	-0.01	0.09	0.14	-0.09
		0.10	0.20	-0.20	0.05	-0.01	0.03	0.20	-0.49	-0.04					
7	61	1.55	-1.30	0.54	-0.68	-1.31	-0.16	-0.28	0.07	0.06	0.23	-1.09	0.09	0.14	0.24
		0.10	0.20	-0.20	0.05	-0.32	0.03	0.05	0.08	-0.31					
8	44	1.32	-1.31	0.59	-0.69	-0.01	1.07	-0.29	-0.02	0.01	0.20	0.09	0.09	0.14	-0.09
		0.10	-0.21	-0.20	0.05	-0.11	0.03	0.20	0.08	-0.04					
9	26	1.05	-1.20	0.61	-0.92	-0.45	0.10	-0.05	-0.29	0.01	0.09	0.06	0.09	0.14	0.07
		0.10	-0.21	0.01	0.05	-0.25	0.03	-0.19	0.08	-0.04					
10	78	0.99	-1.17	0.61	0.10	-0.31	0.06	0.10	-0.26	0.13	0.25	0.02	0.09	-1.03	-0.09
		0.10	0.10	-0.20	0.05	-0.05	0.03	0.20	0.08	-0.04					
11	57	0.70	-1.07	0.58	-0.19	-0.26	-0.16	0.05	-0.27	-1.21	-0.05	-0.03	0.09	0.14	0.23
		0.10	-0.51	0.60	0.05	0.01	0.03	0.04	0.08	-0.04					
12	89	0.77	-1.06	0.58	-0.36	-0.70	-0.16	-0.01	-0.19	-1.29	0.06	0.10	0.09	0.14	0.22
		0.10	0.53	-0.20	0.05	-0.24	0.03	0.03	0.08	-0.31					
13	52	0.75	-1.04	0.57	-0.44	-0.06	-0.16	-0.05	-0.19	0.01	0.22	-0.00	0.09	0.14	0.23
		0.10	-0.21	-0.20	0.05	-0.02	-0.09	0.04	0.08	-0.04					
14	103	0.65	-1.00	0.55	-0.04	-0.51	-0.14	-0.00	-0.26	0.05	-0.10	0.17	0.09	0.14	0.23
		0.10	0.20	0.04	0.05	-0.17	0.03	0.04	-0.49	-0.04					
15	92	0.59	-0.95	0.53	-0.05	-0.23	-0.16	-0.03	-0.26	0.06	0.05	0.04	0.09	0.14	0.24
		0.10	0.20	0.51	0.05	-0.07	0.03	0.05	0.08	-0.04					
16	41	0.55	-0.93	0.52	-0.01	-0.11	-0.16	-0.01	-0.21	0.01	-0.01	0.10	0.09	0.14	0.24
		0.10	-0.21	0.50	0.05	-0.24	0.03	0.05	0.08	-0.04					
17	19	0.35	-0.79	0.43	-0.23	0.12	-0.16	0.04	-0.02	0.01	0.07	0.19	0.09	0.14	0.24
		0.10	-0.21	0.51	0.05	-0.21	-0.06	0.05	0.08	-0.04					
18	60	0.34	-0.79	0.43	-1.06	-0.23	-0.16	-1.48	-0.26	0.06	-0.06	0.12	0.09	0.14	0.24
		0.10	0.20	0.52	0.05	-0.13	0.03	0.05	0.08	-0.04					
19	94	0.33	-0.77	0.42	0.17	-0.20	-0.16	0.10	-0.25	0.13	0.11	0.06	-1.10	0.14	-0.10
		0.10	0.16	-0.20	0.05	-0.10	0.03	-0.35	0.08	-0.04					
20	43	0.32	-0.77	0.42	-0.36	-0.04	-0.16	-0.01	-0.16	0.01	0.10	0.08	0.09	0.14	0.24
		0.10	-0.21	-0.20	0.05	-0.26	0.22	0.05	0.08	-0.04					
21	93	0.31	-0.76	0.41	0.28	0.03	-0.14	0.10	-0.11	0.13	0.13	-0.05	-1.10	0.14	0.21
		0.10	0.16	-0.20	0.05	0.05	-0.12	0.04	0.08	0.13					
22	110	0.31	-0.75	0.41	0.28	0.03	-0.14	0.10	-0.11	0.06	0.13	-0.05	0.09	0.14	0.21
		-0.07	0.24	-0.20	0.05	0.05	-0.12	0.00	0.08	0.13					
23	85	0.27	-0.72	0.39	0.04	-0.16	-0.07	0.08	-0.23	0.13	0.15	0.07	0.09	0.14	0.18
		0.10	0.16	-0.11	0.05	-0.10	0.03	-0.05	0.08	-0.04					
24	51	0.26	-0.72	0.39	-0.04	-1.49	-0.16	-0.23	0.02	0.01	-0.60	0.16	0.09	0.14	0.24
		0.10	-0.21	0.58	0.05	-0.16	0.03	0.05	0.08	-0.04					
25	108	0.25	-0.71	0.38	0.33	-0.33	-0.16	0.10	-0.28	0.06	0.15	0.12	0.09	0.14	-0.09
		0.10	0.20	-0.20	0.05	-0.13	0.03	0.20	-0.49	0.21					
26	109	0.25	-0.71	0.38	0.38	-0.33	-0.16	0.10	-0.28	0.06	0.15	0.12	0.09	0.14	-0.09
		0.10	0.20	-0.20	0.05	-0.13	0.03	0.20	-0.49	0.21					

27	72	0.25	-0.71	0.38	0.38	-0.33	-0.16	0.18	-0.28	0.13	0.15	-0.88	0.89	-1.03	-0.89
		0.18	0.16	-0.28	0.85	0.23	0.83	0.28	0.88	-0.84					
28	49	0.25	-0.71	0.38	-0.28	0.84	-0.88	0.82	-0.18	0.81	0.14	-0.83	0.89	0.14	0.14
		0.18	-0.21	-0.28	0.85	0.82	0.83	-0.11	0.88	-0.84					
29	17	0.24	-0.78	0.37	-0.77	-0.14	-0.13	-0.43	-0.28	0.81	-0.11	0.83	0.89	0.14	0.22
		0.18	-0.21	0.49	0.85	-0.86	-0.88	0.82	0.88	-0.84					
30	123	0.22	-0.89	0.37	-0.33	-0.18	-0.16	0.88	-0.28	0.86	0.22	0.85	0.89	0.14	0.24
		-0.97	0.28	0.39	0.85	-0.88	-0.28	0.85	0.88	-0.84					
31	91	0.22	-0.89	0.36	0.28	-0.28	-0.16	0.18	-0.25	0.13	0.12	0.12	-1.18	0.14	-0.63
		0.18	0.16	-0.28	0.85	-0.13	0.83	-0.21	0.88	0.21					
32	92	0.22	-0.89	0.36	0.28	-0.28	-0.16	0.18	-0.25	0.13	0.12	0.12	-1.18	0.14	-0.63
		0.18	0.16	-0.28	0.85	-0.13	0.83	-0.21	0.88	0.21					
33	119	0.22	-0.89	0.36	0.27	-0.23	-0.16	0.19	-0.26	0.86	0.12	0.12	0.89	0.14	-0.63
		-0.97	0.28	-0.28	0.85	-0.13	0.83	-0.21	0.88	0.21					
34	121	0.22	-0.89	0.36	0.29	-0.28	-0.16	0.18	-0.25	0.86	0.12	0.12	0.89	0.14	-0.63
		-0.97	0.28	-0.28	0.85	-0.13	0.83	-0.21	0.88	0.21					
35	36	0.18	-0.85	0.34	0.82	-0.14	0.85	0.88	-0.23	0.81	0.12	0.81	0.89	0.14	-0.28
		0.18	-0.21	-0.28	0.85	-0.84	0.83	-0.39	0.88	-0.84					
36	82	0.16	-0.83	0.33	-0.36	-0.16	-0.16	-0.13	-0.24	0.13	-0.16	0.82	0.89	-1.03	0.24
		0.18	0.16	0.34	0.85	-0.85	0.83	0.85	0.88	-0.84					
37	124	0.15	-0.82	0.32	-0.48	-0.88	-0.16	-0.18	-0.19	0.86	0.17	0.85	0.89	0.14	0.24
		-0.97	0.28	0.48	0.85	-0.88	-0.34	0.85	0.88	-0.84					
38	106	0.13	-0.88	0.31	-0.59	-0.18	-0.14	-0.17	-0.28	0.86	0.12	0.19	0.89	0.14	0.22
		0.18	0.28	0.58	0.85	-0.19	0.83	0.82	-0.49	-0.84					
39	25	0.12	-0.59	0.30	-0.88	-0.18	-0.16	-0.58	-0.22	0.81	-0.55	0.11	0.89	0.14	0.24
		0.18	-0.21	0.44	0.85	-0.12	0.83	0.85	0.88	-0.84					
40	55	0.11	-0.58	0.30	-0.18	-0.15	-0.14	0.85	-0.23	0.81	0.15	-0.88	0.89	0.14	0.22
		0.18	-0.21	0.59	0.85	-0.83	0.83	0.83	0.88	-0.84					
41	54	0.10	-0.58	0.29	-0.16	-0.88	-0.14	0.86	-0.19	0.81	-0.85	0.13	0.89	0.14	0.22
		0.18	-0.21	0.48	0.85	-0.14	0.83	0.83	0.88	-0.84					
42	2	0.89	-0.58	0.28	0.14	-0.18	-0.16	0.89	-0.29	0.81	0.19	0.81	0.89	0.14	-0.59
		0.18	-0.21	-0.28	0.85	-0.84	0.83	-0.26	0.88	0.21					
43	37	0.85	-0.53	0.26	-0.89	-0.55	-0.16	0.87	-0.25	0.81	0.28	0.18	0.89	0.14	0.21
		0.18	-0.21	-0.28	0.85	-0.28	0.83	0.81	0.88	-0.31					
44	64	0.85	-0.52	0.25	0.12	-0.85	-0.16	0.89	-0.17	0.81	0.82	0.83	0.89	0.14	0.21
		0.18	-0.21	-0.28	-0.74	-0.86	0.83	0.88	0.88	0.21					
45	65	0.85	-0.52	0.26	0.12	-0.85	-0.16	0.89	-0.17	0.81	0.82	0.83	0.89	0.14	0.21
		0.18	-0.21	-0.28	-0.74	-0.86	0.83	0.88	0.88	0.21					
46	5	-0.88	-0.47	0.22	0.43	-0.86	0.18	0.11	-0.18	0.81	0.14	0.85	0.89	0.14	-0.12
		0.18	-0.21	-0.28	0.85	-0.88	0.83	-0.36	0.88	-0.84					
47	84	-0.81	-0.48	0.22	-0.28	-0.85	-0.16	0.82	-0.17	0.13	-0.21	0.85	0.89	-1.03	0.23
		0.18	0.16	-0.28	0.85	-0.86	0.83	0.83	0.88	-0.84					
48	105	-0.81	-0.48	0.21	-0.31	-0.81	-0.16	0.81	-0.14	0.86	-0.18	0.84	0.89	0.14	0.23
		0.18	0.28	0.24	0.85	-0.87	0.83	0.84	-0.49	0.11					
49	87	-0.83	-0.43	0.20	-0.28	0.86	-0.16	0.82	-0.88	0.13	0.82	-0.82	0.89	0.14	0.24
		0.18	0.16	-0.28	0.85	-0.82	0.83	0.89	0.88	-0.84					
50	48	-0.86	-0.47	0.19	-0.65	0.86	-0.16	-0.24	-0.86	0.81	0.89	0.85	0.89	0.14	0.24
		0.18	-0.21	-0.28	0.85	-0.88	0.83	0.85	0.88	-0.84					
51	66	-0.89	-0.38	0.18	-0.84	0.83	-0.16	0.88	-0.11	0.81	0.12	-0.82	0.89	0.14	0.28
		0.18	-0.21	-0.28	-0.74	-0.81	0.83	-0.81	0.88	0.21					
52	120	-0.89	-0.36	0.16	0.81	-0.11	-0.16	0.86	-0.21	0.86	0.12	-0.82	0.89	0.14	0.28
		-0.97	0.28	-0.28	0.85	-0.81	0.83	-0.81	0.88	0.21					
53	114	-0.18	-0.34	0.15	-0.24	0.86	-0.16	0.83	-0.88	0.86	0.83	-0.85	0.89	0.14	0.24
		0.18	0.28	0.36	0.85	0.85	0.83	0.85	-0.49	-0.84					
54	38	-0.13	-0.31	0.12	-0.56	0.15	-0.16	-0.14	0.81	0.81	0.87	-0.87	0.89	0.14	0.24
		0.16	-0.21	0.52	0.85	0.89	0.83	0.85	0.88	-0.84					
55	27	-0.14	-0.29	0.12	-0.64	0.86	-0.16	-0.23	-0.86	0.81	-0.33	-0.83	0.89	0.14	0.24
		0.18	-0.21	0.13	0.85	0.82	-0.28	0.85	0.88	-0.84					
56	83	-0.14	-0.29	0.12	-0.64	0.86	0.19	-0.33	-0.86	0.13	-0.33	-0.83	0.89	-1.03	0.24
		0.18	0.16	0.13	0.85	0.82	0.83	0.85	0.85	-0.84					
57	59	-0.18	-0.23	0.88	-0.28	-0.81	-0.16	0.82	-0.14	0.86	0.84	0.11	0.89	0.14	0.24
		0.18	0.28	-0.28	0.85	-0.13	0.22	0.85	0.88	-0.84					
58	58	-0.18	-0.23	0.88	-0.33	0.14	-0.15	0.81	0.88	0.81	-0.11	-0.83	0.89	0.14	0.23
		0.18	-0.21	0.45	0.85	0.81	-0.89	0.83	0.88	-0.84					

59	46	-0.21	-0.19	0.06	-0.37	0.22	1.67	-0.01	0.14	-0.35	0.25	-0.07	0.09	0.14	-0.09
		0.10	0.14	-0.20	0.05	0.09	0.03	0.20	0.08	-0.04					
60	12	-0.23	-0.15	0.04	-0.27	0.02	-0.16	0.03	-0.12	0.01	0.25	-0.06	0.09	0.14	0.16
		0.10	-0.21	-0.20	0.05	0.07	0.03	-0.06	0.04	0.21					
61	33	-0.25	-0.17	0.02	0.19	0.04	-0.11	0.10	-0.17	0.01	0.29	0.19	0.09	0.14	0.19
		0.10	-0.21	-0.20	0.05	-0.20	0.03	-0.03	0.08	-0.04					
62	47	-0.29	-0.05	-0.01	0.45	0.15	-0.14	0.11	0.01	0.01	-0.06	-0.03	0.09	0.14	0.22
		0.10	-0.21	0.57	0.05	0.02	-0.03	0.02	0.08	-0.04					
63	21	-0.32	-0.04	-0.02	0.09	0.05	-0.16	0.09	-0.06	0.01	-0.29	-0.05	0.09	0.14	0.24
		0.10	-0.21	0.42	0.05	0.04	0.03	0.05	0.08	0.21					
64	115	-0.33	-0.04	-0.02	0.09	0.06	-0.16	0.09	-0.06	0.06	-0.29	-0.05	0.09	0.14	0.24
		0.10	0.20	0.42	0.05	0.04	0.03	0.05	-0.49	0.21					
65	32	-0.32	0.08	-0.04	-0.34	0.15	-0.01	0.08	0.01	0.01	0.08	-0.10	0.09	0.14	0.14
		0.10	-0.21	-0.20	0.05	0.20	0.04	-0.10	0.08	-0.04					
66	53	-0.33	0.02	-0.05	-0.32	0.10	-0.16	0.01	0.04	0.01	-0.25	-0.03	0.09	0.14	0.24
		0.10	-0.21	0.46	0.05	0.01	0.02	0.05	0.08	-0.04					
67	29	-0.35	0.06	-0.06	-0.01	0.13	-0.15	-0.19	-0.01	0.01	0.06	-0.03	0.09	0.14	0.24
		0.10	-0.21	-0.20	0.05	0.01	-0.29	0.05	0.08	-0.04					
68	13	-0.35	0.08	-0.07	-0.10	0.17	-0.16	0.07	0.04	0.01	-0.06	0.08	0.09	0.14	0.24
		0.10	-0.21	0.58	0.05	-0.03	-0.08	0.05	0.08	-0.04					
69	34	-0.37	0.11	-0.08	0.48	0.17	-0.16	0.10	0.03	0.01	-0.76	-0.05	0.09	0.14	0.24
		0.10	-0.21	-0.20	0.05	0.04	0.03	0.05	0.08	-0.04					
70	90	-0.37	0.11	-0.08	0.02	0.10	-0.14	0.06	0.04	0.13	-0.79	0.01	0.09	0.14	0.22
		0.10	0.10	-0.20	0.05	-0.04	0.03	0.03	0.08	-0.04					
71	24	-0.37	0.13	-0.09	-0.09	0.23	-0.14	0.07	0.10	0.01	-0.22	0.01	0.09	0.14	0.24
		0.10	-0.21	0.56	0.05	-0.04	-0.06	0.05	0.08	-0.04					
72	15	-0.37	0.13	-0.09	-0.32	0.23	-0.16	0.01	0.10	0.01	-0.12	0.09	0.09	0.14	0.24
		0.10	-0.21	0.60	0.05	-0.03	0.03	0.05	0.08	-0.04					
73	96	-0.38	0.14	-0.10	-0.07	0.09	0.42	0.07	-0.05	0.13	0.12	-0.02	-1.10	0.14	0.24
		0.10	0.15	-0.20	0.05	-0.01	-0.33	0.05	0.08	-0.04					
74	8	-0.39	0.15	-0.10	-0.20	0.20	0.04	0.05	0.07	0.01	0.12	-0.01	0.09	0.14	-0.51
		0.10	-0.21	-0.20	0.05	-0.02	0.03	-0.32	0.08	-0.04					
75	38	-0.39	0.17	-0.11	0.19	0.23	1.67	0.09	0.11	0.01	0.25	0.10	0.09	0.14	-0.69
		0.10	-0.21	-0.20	0.05	-0.12	0.03	0.20	0.08	-0.04					
76	127	-0.40	0.19	-0.11	0.34	0.10	-0.15	0.10	0.04	0.06	-0.14	0.04	0.09	0.14	0.24
		-0.07	0.20	-0.20	0.05	-0.07	0.03	0.05	0.08	0.21					
77	39	-0.40	0.19	-0.12	0.39	0.19	-0.16	0.10	0.05	0.01	-0.07	0.07	0.09	0.14	0.24
		0.10	-0.21	-0.20	0.05	-0.09	0.03	0.05	0.08	-0.04					
78	40	-0.41	0.21	-0.12	-0.15	0.07	-0.16	0.06	-0.07	-1.29	-0.22	0.16	0.09	0.14	0.24
		0.10	0.53	0.60	0.05	-0.24	0.03	0.05	0.08	-0.04					
79	104	-0.45	0.32	-0.16	0.15	0.21	-0.14	0.09	0.08	0.06	-0.16	-0.01	0.09	0.14	0.23
		0.10	0.20	-0.20	0.05	-0.02	0.03	0.03	-0.49	-0.04					
80	56	-0.45	0.32	-0.15	-0.13	0.30	-0.15	0.06	0.20	0.01	-0.12	-0.00	0.09	0.14	0.23
		0.10	-0.21	0.59	0.05	-0.03	0.03	0.04	0.08	-0.04					
81	88	-0.45	0.34	-0.17	0.39	0.23	-0.16	0.10	0.10	0.13	0.16	-0.03	0.09	-1.03	-0.47
		0.10	0.16	-0.20	0.05	0.01	0.03	-0.35	0.05	-0.04					
82	1	-0.47	0.38	-0.18	-0.05	0.15	0.10	0.07	0.02	0.01	0.08	0.01	0.09	0.14	0.08
		0.10	-0.21	-0.20	0.05	-0.04	0.03	-0.18	0.08	-0.04					
83	107	-0.47	0.40	-0.19	-0.11	0.08	-0.14	0.06	-0.13	0.06	-0.01	0.10	0.09	0.14	0.23
		0.10	0.20	-0.20	0.05	-0.19	0.03	0.03	-0.49	-0.04					
84	58	-0.47	0.41	-0.19	0.10	0.17	-0.11	0.04	0.04	0.01	-0.01	-0.08	0.09	0.14	0.21
		0.10	-0.21	0.27	-0.74	0.16	0.03	-0.09	0.08	-0.04					
85	10	-0.48	0.42	-0.19	-0.02	0.20	1.06	0.04	0.07	0.01	0.23	-0.01	0.09	0.14	-0.52
		0.10	-0.21	-0.20	0.05	-0.02	0.03	-0.32	0.08	-0.04					
86	110	-0.49	0.47	-0.21	0.52	0.20	-0.16	0.11	0.07	0.06	0.10	0.10	0.09	0.14	-0.55
		0.10	0.20	-0.20	0.05	-0.10	0.02	-0.20	-0.49	-0.04					
87	125	-0.50	0.49	-0.21	-0.21	0.21	-0.16	0.04	0.08	0.06	0.16	-0.02	0.09	0.14	0.24
		-0.07	0.20	-0.20	0.05	-0.01	0.03	0.05	0.08	0.21					
88	95	-0.50	0.51	-0.22	-0.27	0.21	-0.16	0.03	0.08	0.13	0.16	-0.02	-1.10	0.14	0.24
		0.10	0.10	-0.20	0.05	-0.01	0.03	0.05	0.08	0.21					
89	67	-0.50	0.51	-0.22	-0.07	0.20	-0.16	0.07	0.07	0.01	-0.20	-0.07	0.09	0.14	0.24
		0.10	-0.21	-0.20	-0.74	0.08	0.03	0.05	0.08	0.21					
90	111	-0.51	0.53	-0.22	0.44	0.26	1.06	0.11	0.14	0.06	0.21	0.19	0.09	0.14	-0.89
		0.10	0.20	-0.20	0.05	-0.19	0.03	0.20	-0.49	-0.04					
91	45	-0.54	0.58	-0.26	-0.21	0.27	-0.12	0.04	0.18	-0.35	-0.08	0.05	0.09	0.14	0.22
		0.10	0.34	-0.20	0.05	-0.08	0.03	0.02	0.08	-0.04					

92	28	-0.55	0.71	-0.27	0.04	0.28	-0.85	0.09	0.17	-1.21	0.07	-0.09	0.09	0.14	0.24
		0.10	-0.51	0.17	0.05	0.10	0.03	0.05	0.08	-0.04					
93	108	-0.55	0.71	-0.27	0.58	0.27	-0.16	0.11	0.16	0.05	0.12	-0.09	0.09	0.14	0.24
		0.10	0.28	-0.28	0.05	0.21	0.03	0.05	-0.49	-0.04					
94	71	-0.56	0.75	-0.28	0.62	0.27	-0.03	0.11	0.16	0.13	0.11	-0.10	0.09	-1.03	0.16
		0.10	0.16	-0.20	0.05	0.32	0.03	-0.08	0.08	-0.04					
95	81	-0.55	0.76	-0.28	0.45	0.28	-0.16	0.11	0.17	0.13	0.05	-0.12	0.09	-1.03	0.24
		0.10	0.16	-0.28	0.05	0.34	0.03	0.05	0.08	-0.04					
96	69	-0.56	0.79	-0.28	0.47	0.22	-0.16	0.11	0.10	0.01	-0.30	-0.08	0.09	0.14	0.24
		0.10	-0.21	0.22	-0.74	0.15	-0.42	0.05	0.08	-0.04					
97	75	-0.57	0.82	-0.29	0.37	0.24	1.67	0.10	0.12	0.13	0.25	-0.05	0.09	-1.03	-0.09
		0.10	0.16	-0.28	0.05	0.04	0.03	0.28	0.08	-0.04					
98	122	-0.58	0.87	-0.30	0.15	0.26	-0.16	0.09	0.14	0.06	-1.08	-0.08	0.09	0.14	0.24
		-0.07	0.28	0.15	0.05	0.15	0.03	0.05	0.08	0.17					
97	76	-0.57	0.82	-0.29	0.37	0.24	1.67	0.10	0.12	0.13	0.25	-0.05	0.09	-1.03	-0.09
		0.10	0.16	-0.28	0.05	0.04	0.03	0.28	0.08	-0.04					
98	122	-0.58	0.87	-0.30	0.15	0.26	-0.16	0.09	0.14	0.06	-1.08	-0.08	0.09	0.14	0.24
		-0.07	0.28	0.15	0.05	0.15	0.03	0.05	0.08	0.17					
99	86	-0.59	0.94	-0.31	0.78	0.26	1.67	0.11	0.15	0.13	0.25	-0.05	0.09	0.14	-0.09
		0.10	0.16	-0.28	0.05	0.04	0.03	0.28	0.08	-0.04					
100	86	-0.59	0.94	-0.31	0.78	0.26	1.67	0.11	0.15	0.13	0.25	-0.05	0.09	0.14	-0.09
		0.10	0.16	-0.28	0.05	0.04	0.03	0.28	0.08	-0.04					
101	11	-0.60	1.02	-0.33	0.21	0.29	-0.16	0.10	0.16	0.01	0.11	-0.09	0.09	0.14	0.24
		0.10	-0.21	-0.28	0.05	0.21	0.03	0.05	0.08	-0.04					
102	22	-0.63	1.23	-0.35	0.53	0.30	-0.16	0.11	0.28	0.01	-0.61	-0.09	0.09	0.14	0.24
		0.10	-0.21	0.28	0.05	0.10	0.03	0.05	0.08	-0.04					
103	110	-0.63	1.23	-0.35	0.53	0.30	-0.16	0.11	0.28	0.06	-0.61	-0.09	0.09	0.14	0.24
		0.10	0.28	0.28	0.05	0.10	0.03	0.05	-0.49	-0.04					
104	128	-0.63	1.27	-0.36	0.78	0.32	-0.16	0.11	0.27	0.05	0.21	-0.10	0.09	0.14	0.24
		-0.07	0.28	-0.28	0.05	0.32	0.03	0.05	0.08	-0.04					
105	9	-0.63	1.29	-0.36	-0.12	0.28	-0.12	0.06	0.07	0.01	-0.32	0.09	0.09	0.14	0.21
		0.10	-0.21	0.10	0.05	-0.11	0.03	0.01	0.08	-0.04					
106	97	-0.64	1.33	-0.37	-0.03	0.31	-0.16	0.08	0.22	0.13	-0.44	-0.08	-1.10	0.14	0.24
		0.10	0.15	-0.28	0.05	0.07	0.03	0.05	0.08	-0.04					
107	126	-0.64	1.33	-0.37	0.13	0.31	-0.16	0.09	0.21	0.06	-0.44	-0.08	0.09	0.14	0.24
		-0.07	0.28	-0.28	0.05	0.07	0.03	0.05	0.08	-0.04					
108	7	-0.64	1.35	-0.37	0.45	0.35	-0.11	0.11	0.27	0.01	0.13	-0.05	0.09	0.14	0.20
		0.10	-0.21	-0.28	0.05	0.05	0.03	-0.01	0.08	-0.04					
109	79	-0.64	1.35	-0.37	0.57	0.32	-0.16	0.11	0.23	0.13	0.08	-0.08	0.09	-1.03	0.08
		0.10	0.15	-0.28	0.05	0.15	0.03	-0.16	0.08	-0.04					
110	50	-0.65	1.43	-0.38	0.23	0.32	0.02	0.10	0.23	0.01	0.22	-0.09	0.09	0.14	0.12
		0.10	-0.21	0.52	0.05	0.21	0.03	-0.13	0.08	-0.04					
111	35	-0.66	1.62	-0.39	0.35	0.32	-0.16	0.10	0.22	0.01	0.03	-0.10	0.09	0.14	0.24
		0.10	-0.21	-0.28	0.05	0.32	0.03	0.05	0.08	-0.04					
112	117	-0.65	1.62	-0.39	0.83	0.34	-0.16	0.11	0.25	0.05	0.06	-0.10	0.09	0.14	0.24
		0.10	0.28	-0.28	0.05	0.28	0.03	0.05	-0.49	-0.04					
113	6	-0.66	1.65	-0.39	0.69	0.32	-0.16	0.11	0.22	0.01	0.24	-0.09	0.09	0.14	0.24
		0.10	-0.21	-0.28	0.05	0.21	0.03	0.05	0.08	-0.04					
114	112	-0.66	1.65	-0.39	0.12	0.34	0.75	0.09	0.25	0.06	0.28	-0.10	0.09	0.14	-0.33
		0.10	0.28	-0.28	0.05	0.32	0.03	-0.48	-0.49	-0.04					
115	74	-0.66	1.69	-0.40	1.15	0.33	-0.16	0.11	0.24	0.13	0.08	-0.09	0.09	-1.03	-0.09
		0.10	0.16	-0.28	0.05	0.23	0.03	0.28	0.08	-0.04					
116	16	-0.67	1.77	-0.40	0.37	0.34	-0.16	0.10	0.25	0.01	0.06	-0.10	0.09	0.14	0.24
		0.10	-0.21	-0.28	0.05	0.32	0.03	0.05	0.08	-0.04					
117	78	-0.67	1.77	-0.40	0.36	0.34	-0.16	0.10	0.25	0.01	-0.15	-0.10	0.09	0.14	0.24
		0.10	-0.21	0.51	-0.74	0.41	-0.17	0.05	0.08	-0.04					
118	99	-0.67	1.88	-0.41	-0.03	0.32	-0.16	0.08	0.22	0.13	0.08	-0.10	-1.10	0.14	0.19
		0.10	0.16	-0.28	0.05	0.28	0.03	-0.02	0.08	0.21					
119	88	-0.69	2.39	-0.43	0.81	0.35	-0.16	0.11	0.27	0.13	0.05	-0.10	-1.10	0.14	0.24
		0.10	0.16	-0.28	0.05	0.29	0.03	0.05	0.08	-0.04					
120	78	-0.69	2.54	-0.43	1.14	0.35	-0.16	0.11	0.27	0.13	0.01	-0.08	0.09	-1.03	-0.09
		0.10	0.16	-0.28	0.05	0.15	0.03	0.28	0.08	-0.04					

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

G&M MODEL RUN2 DEP VAR IS LNTSMA RESIDUAL ROOT MEAN SQUARE OF FITTED EQUATION: 0.48

STANDARD DEVIATION ESTIMATED FROM RESIDUALS OF NEIGHBORING OBSERVATIONS (OBSERVATIONS 1 TO 4 APART IN FITTED Y ORDER).

NO.	CUMULATIVE STD DEV	ORDERED BY WSSD: WSSD	OBSV.	OBSV.	DEL RESIDUALS	ORDERED BY FITTED Y: WSSD	DEL RESIDUALS	FITTED Y	OBSV.	SEQ.
1	0.00	0.0	88	88	0.00	81.75	0.51	3.85	26	1
2	0.26	0.0	65	64	0.42	88.74	0.92	3.87	77	2
3	0.25	0.0	92	91	0.24	29.46	0.39	3.89	81	3
4	0.35	0.00	119	121	0.64	7.21	0.71	3.92	193	4
5	0.35	0.01	198	189	0.36	25.43	0.76	3.94	69	5
6	0.31	0.11	35	16	0.12	20.53	0.69	4.00	80	6
7	0.31	0.16	13	14	0.33	11.66	0.14	4.21	25	7
8	0.31	0.32	81	71	0.32	18.73	0.51	4.22	84	8
9	0.32	0.32	15	14	0.37	0.0	0.24	4.28	92	9
10	0.36	0.38	15	13	0.78	11.31	0.13	4.28	91	10
11	0.33	0.39	54	55	0.84	13.39	0.56	4.31	119	11
12	0.36	0.47	66	64	0.78	17.33	0.54	4.32	72	12
13	0.35	0.47	66	65	0.27	21.79	1.67	4.35	94	13
14	0.34	0.59	58	53	0.15	23.56	1.21	4.35	83	14
15	0.42	0.72	87	59	1.57	18.28	0.38	4.36	121	15
16	0.41	0.74	16	6	0.38	79.99	0.41	4.37	27	16
17	0.49	0.77	35	6	0.18	67.81	0.18	4.42	73	17
18	0.44	0.81	7	35	1.29	24.28	0.29	4.48	51	18
19	0.42	1.01	13	21	0.13	12.42	0.34	4.48	124	19
20	0.41	1.07	12	32	0.86	14.62	0.44	4.51	82	20
21	0.49	1.09	21	14	0.20	15.29	0.49	4.62	29	21
22	0.44	1.24	7	16	1.31	1.53	0.19	4.72	41	22
23	0.42	1.37	34	98	0.88	7.58	0.35	4.73	17	23
24	0.41	1.53	41	17	0.19	15.29	0.88	4.73	37	24
25	0.42	1.79	92	94	0.73	17.71	0.72	4.74	57	25
26	0.44	1.79	91	94	0.97	19.87	0.79	4.78	48	26
27	0.45	1.83	15	21	0.57	8.73	0.28	4.83	88	27
28	0.43	1.95	43	52	0.86	5.78	0.46	4.85	8	28
29	0.43	1.99	79	71	0.43	4.33	0.86	4.92	2	29
30	0.44	2.16	81	79	0.75	16.62	0.79	4.95	198	30
31	0.43	2.29	116	22	0.81	18.91	0.43	4.99	123	31
32	0.42	2.28	59	33	0.12	14.31	0.28	5.00	189	32
33	0.44	2.34	52	49	0.91	8.78	0.18	5.02	128	33
34	0.45	2.42	30	54	1.12	0.47	0.27	5.03	66	34
35	0.46	2.45	117	6	0.66	0.0	0.42	5.04	85	35
36	0.46	2.62	56	47	0.33	55.12	0.44	5.04	64	36
37	0.47	2.64	69	68	1.11	30.55	0.93	5.14	181	37
38	0.49	2.97	87	114	1.13	83.36	0.85	5.18	42	38
39	0.49	2.98	114	38	0.43	13.52	0.58	5.18	67	39
40	0.50	2.98	54	85	0.81	27.39	0.23	5.24	96	40
41	0.49	3.09	35	58	0.38	24.22	0.47	5.28	62	41
42	0.49	3.13	39	21	0.22	10.71	0.83	5.33	197	42
43	0.49	3.14	58	87	0.78	29.39	0.46	5.36	186	43
44	0.51	3.22	115	13	1.83	21.95	0.54	5.43	95	44
45	0.51	3.22	35	117	0.84	23.78	0.22	5.43	36	45
46	0.52	3.23	18	117	0.96	54.11	0.78	5.45	48	46
47	0.52	3.29	11	198	0.49	21.64	0.82	5.46	192	47
48	0.53	3.30	114	54	0.69	5.15	0.18	5.46	43	48
49	0.52	3.34	49	12	0.19	22.37	0.59	5.46	185	49
50	0.51	3.35	30	13	0.19	44.19	0.44	5.47	122	50
51	0.51	3.41	22	7	0.24	21.29	0.51	5.49	52	51
52	0.50	3.42	16	58	0.24	11.84	1.41	5.50	34	52
53	0.49	3.42	96	95	0.14	22.39	0.95	5.51	49	53
54	0.49	3.43	59	114	0.44	13.43	0.78	5.52	28	54
55	0.50	3.47	55	85	0.77	6.96	1.38	5.52	12	55
56	0.50	3.54	58	59	0.79	9.61	1.43	5.54	98	56

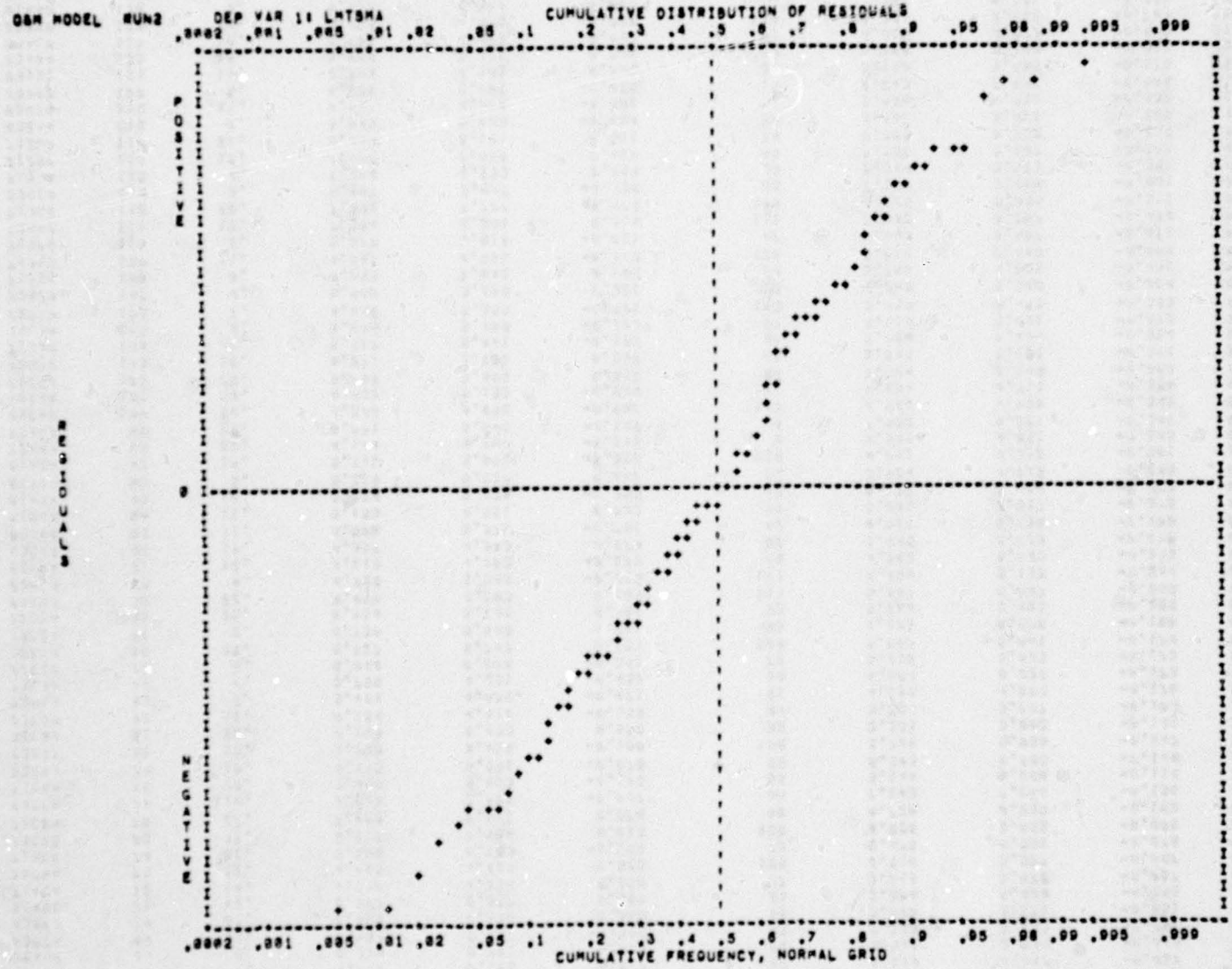


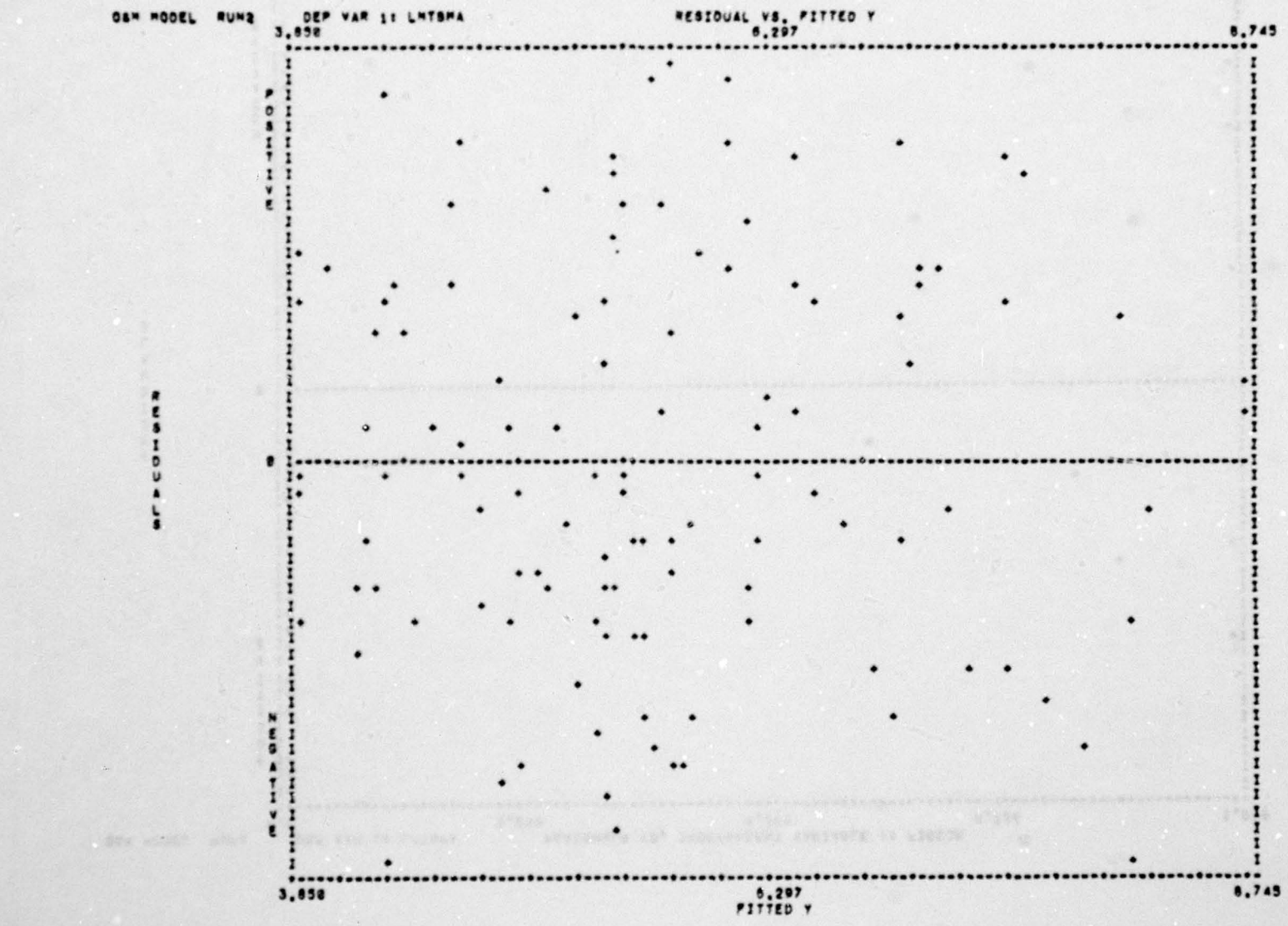
LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

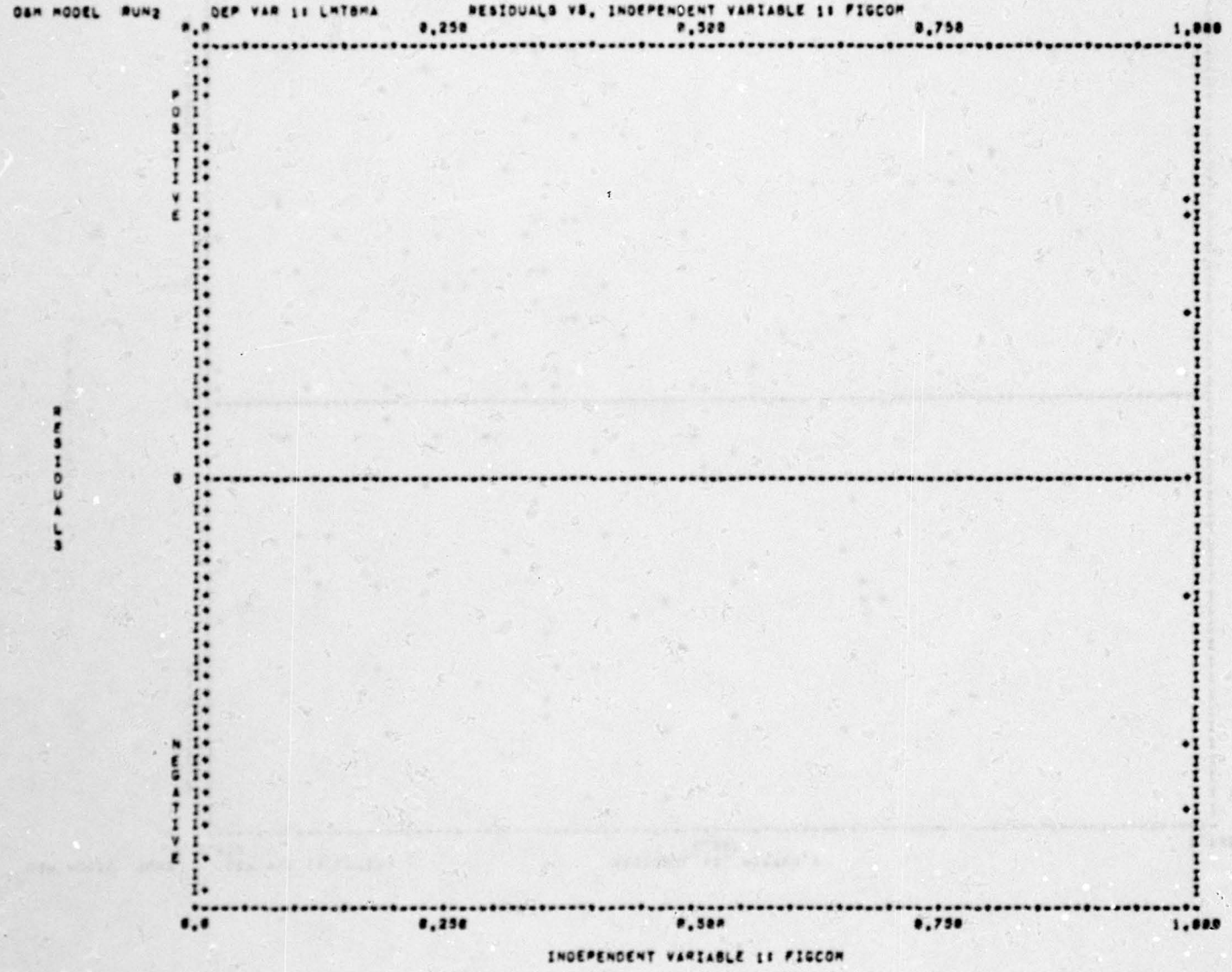
D&M MODEL RUN2 DEP VAR IS LMTSMA

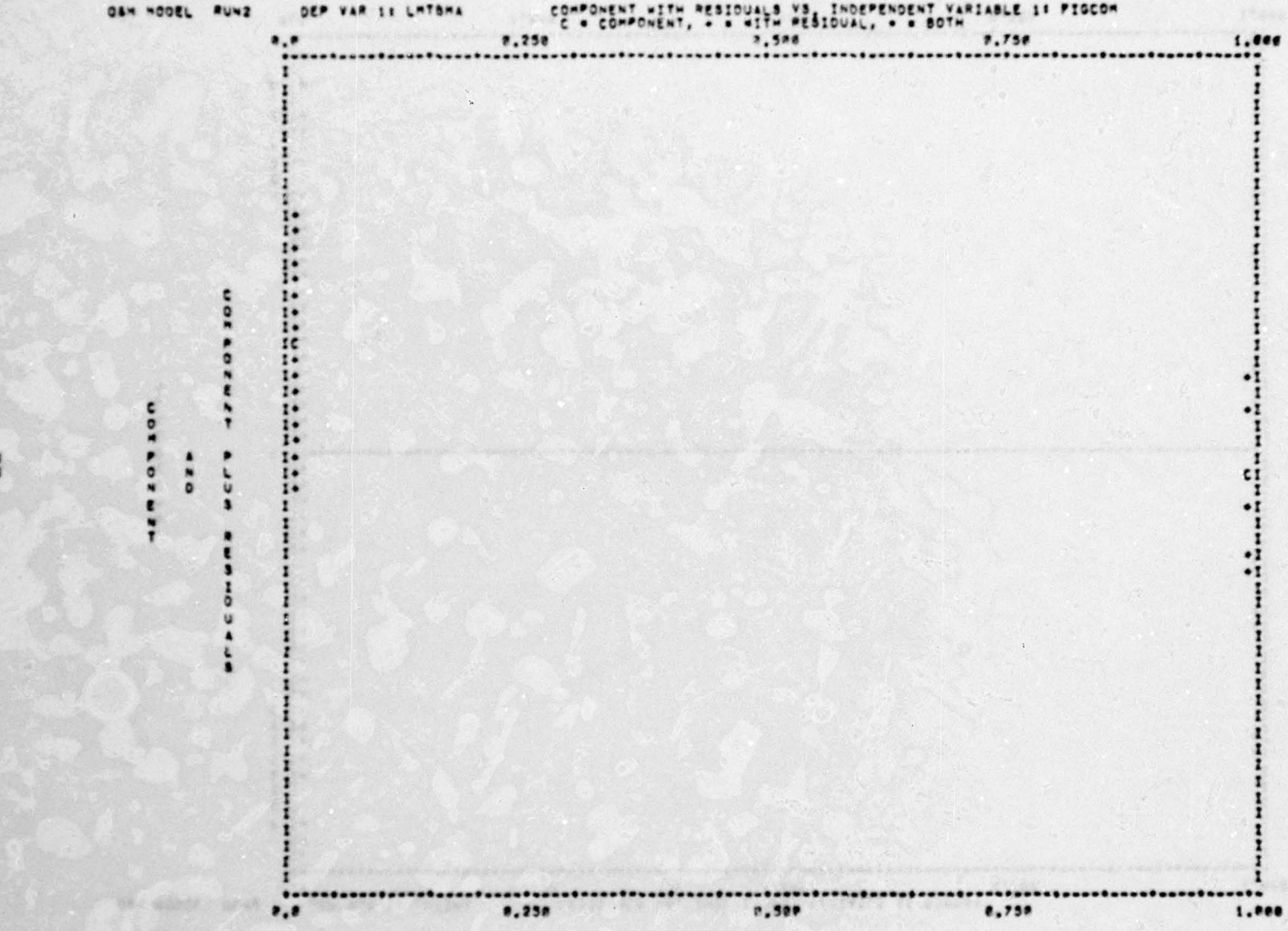
ORDERED BY COMPUTER INPUT						ORDERED BY RESIDUALS				
IDENT.	OBSV.	HSS DISTANCE	OBS. Y	FITTED Y	RESIDUAL	OBSV.	OBS. Y	FITTED Y	ORDERED RESID.	SEQ
71828	1	3.	5.298	5.732	-0.437	87	6.738	5.848	0.891	1
71L8P	2	5.	5.281	4.923	0.158	115	6.989	6.135	0.854	2
71P8P	3	4.	6.166	5.546	0.620	127	6.562	5.711	0.851	3
71718	6	19.	7.832	8.181	-0.349	94	5.153	4.351	0.802	4
724G8	7	13.	8.172	7.508	0.664	45	6.888	6.188	0.708	5
71G5P	8	3.	4.546	4.851	-0.305	48	5.488	4.775	0.692	6
71FA8	9	11.	6.819	6.436	0.383	11	7.669	6.984	0.685	7
71F8P	10	10.	6.358	6.283	0.075	49	6.185	5.587	0.677	8
71CA8	11	9.	7.569	6.984	0.585	61	7.183	6.433	0.670	9
710A8	12	2.	6.089	5.524	0.485	7	8.172	7.508	0.664	10
51EA8	13	3.	6.864	6.237	-0.173	5	6.166	5.548	0.620	11
52A48	14	3.	6.453	6.300	0.153	75	8.217	7.604	0.613	12
52A8P	15	4.	6.757	6.234	0.523	67	5.760	5.183	0.577	13
6380P	16	28.	7.293	7.941	-0.648	41	5.287	4.717	0.570	14
71A8P	17	9.	5.110	4.726	0.384	68	6.314	5.761	0.552	15
74JA8	18	95.	5.569	5.588	-0.018	32	6.111	5.568	0.543	16
74JC8	19	7.	6.569	6.471	0.098	15	6.757	6.234	0.523	17
52G41	20	13.	5.242	5.517	-0.275	12	6.089	5.524	0.485	18
71Z48	21	3.	6.199	6.945	-0.847	54	6.428	5.968	0.452	19
71Z8P	22	14.	7.598	7.176	0.421	26	4.299	3.850	0.449	20
73EP8	25	9.	3.924	4.212	-0.288	22	7.598	7.176	0.421	21
73M48	26	22.	4.299	3.850	0.449	55	6.513	6.100	0.413	22
73MC8	27	4.	4.329	4.367	-0.037	116	7.477	7.066	0.410	23
73G9P	29	4.	4.784	4.622	0.162	89	4.489	4.085	0.404	24
735C8	30	4.	5.198	5.859	-0.670	17	5.118	4.736	0.384	25
73KE8	32	2.	5.111	5.568	0.543	8	6.819	6.436	0.383	26
73KFA	33	2.	5.344	5.901	-0.557	76	7.485	7.111	0.374	27
73KK8	34	5.	4.765	5.501	-0.736	73	4.795	4.425	0.370	28
75932	35	17.	7.177	7.708	-0.531	79	7.896	7.536	0.360	29
748D8	36	6.	4.848	5.429	-0.589	103	4.277	3.923	0.354	30
748F8	37	5.	4.765	4.728	0.037	71	6.987	6.557	0.350	31
7481P	38	16.	7.143	7.249	-0.106	121	4.784	4.361	0.343	32
76A18	39	3.	5.945	6.215	-0.270	102	5.799	5.463	0.335	33
76GA8	40	13.	5.984	5.448	-0.384	107	5.650	5.329	0.321	34
74FF8	41	14.	5.287	4.717	0.570	111	7.384	6.999	0.314	35
74FA8	42	58.	4.918	5.188	-0.270	117	8.442	8.131	0.311	36
74FH8	43	6.	5.177	5.464	-0.287	51	4.745	4.476	0.269	37
74FU8	44	48.	5.524	5.687	-0.163	53	6.096	5.833	0.263	38
73CR8	45	6.	6.888	6.188	0.708	72	4.588	4.328	0.260	39
73CG8	46	19.	6.818	6.817	0.001	122	5.679	5.472	0.206	40
859H8	47	4.	6.394	6.857	-0.473	108	7.235	7.042	0.193	41
74FC8	48	4.	5.468	4.775	0.692	65	8.927	8.745	0.181	42
74FJ8	49	4.	6.185	5.587	0.577	2	5.981	4.923	0.158	43
74FK8	50	15.	7.258	8.147	-0.889	14	6.453	6.300	0.153	44
74FU8	51	23.	4.745	4.476	0.269	58	5.896	5.785	0.110	45
74KA8	52	11.	5.264	5.493	-0.229	19	6.569	6.471	0.098	46
74KC8	53	3.	6.096	5.833	0.263	88	8.836	8.745	0.091	47
74CA8	54	4.	6.429	5.968	0.452	123	5.073	4.998	0.083	48
74C98	55	5.	6.513	6.100	0.413	96	5.319	5.237	0.082	49
74CC8	56	5.	6.543	6.683	-0.140	29	4.784	4.622	0.082	50
74FA1	57	28.	4.715	4.743	-0.028	18	5.358	5.283	0.075	51
74E98	58	3.	5.896	5.785	0.110	92	4.357	4.283	0.074	52
73PH2	59	2.	5.166	5.843	-0.677	37	4.745	4.728	0.037	53
73PA2	60	21.	3.584	3.944	-0.360	65	5.838	5.825	0.012	54
73PD8	61	39.	3.846	3.885	-0.040	46	6.818	6.817	0.001	55
73PF8	62	14.	5.131	5.283	-0.151	110	5.607	5.618	-0.011	56
71NA8	64	5.	4.359	5.043	-0.683	124	4.459	4.476	-0.017	57
710U8	65	5.	4.784	5.043	-0.258	18	5.569	5.588	-0.018	58

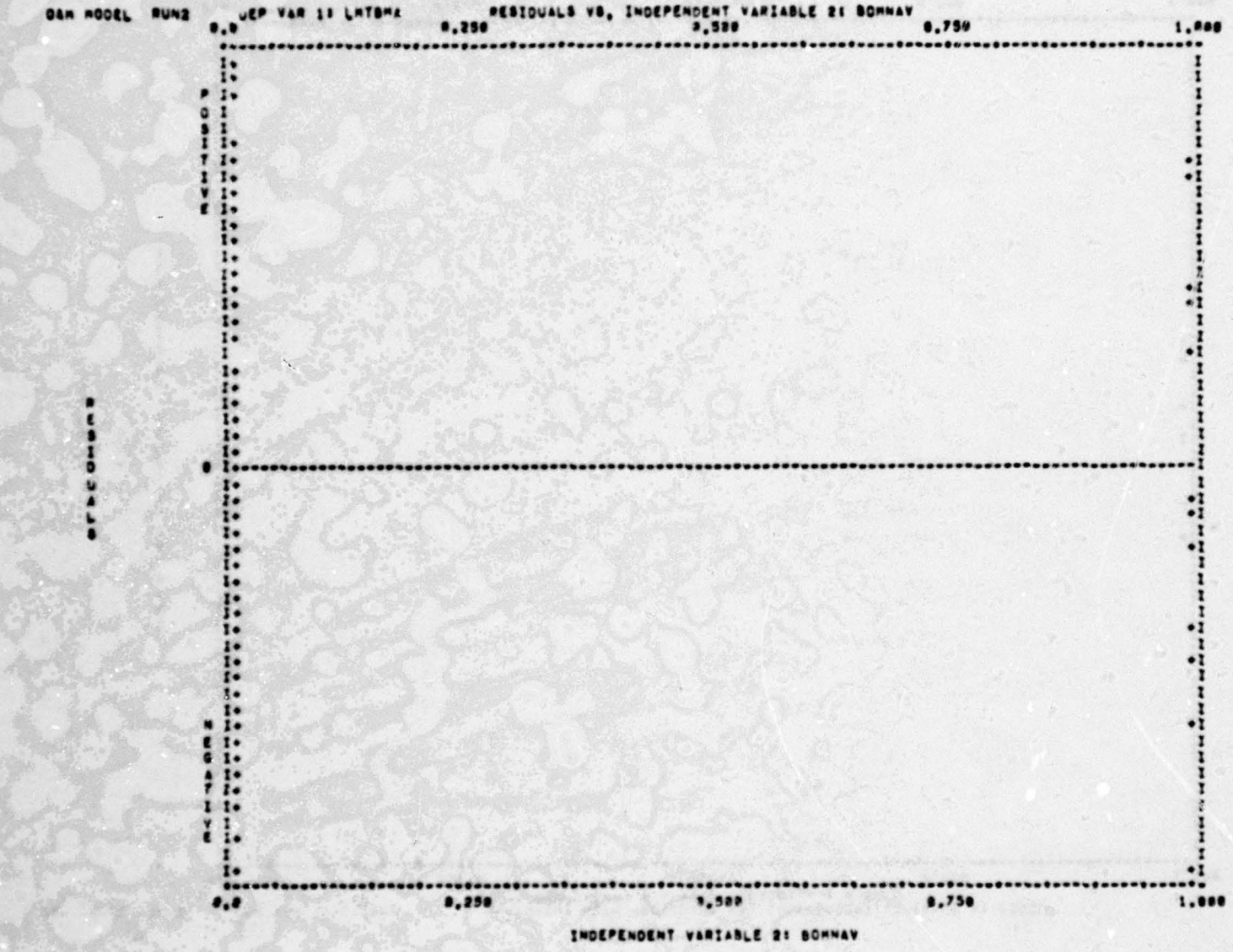
63AAP	66	*.	5,938	5,925	P,P12	57	4,715	4,743	-P,P28	59
65AAP	67	7.	5,760	5,183	P,577	27	4,329	4,367	-P,P37	6P
634BP	68	8.	6,314	5,761	P,552	61	3,846	3,885	-P,P40	61
638CP	69	11.	5,137	5,697	-P,560	21	6,199	6,245	-P,P47	62
638FP	7P	23.	7,896	7,536	P,360	93	5,52P	5,571	-P,P51	63
71A8E	71	12.	6,907	6,557	P,350	95	5,374	5,428	-P,P53	64
71A6A	72	14.	4,550	4,32P	P,26P	77	3,818	3,875	-P,P57	65
73D9A	73	62.	4,795	4,425	P,370	125	5,518	5,577	-P,P67	66
71ACC	74	31.	6,363	6,932	-P,569	79	6,475	6,551	-P,P76	67
73C8Q	75	47.	8,217	7,6P4	P,613	12P	4,936	5,P22	-P,P86	68
73CEN	76	27.	7,485	7,111	P,374	88	4,728	4,829	-P,1P8	69
73CFK	77	116.	3,81P	3,875	-P,P57	38	7,143	7,249	-P,1P6	7P
73DAM	78	26.	5,45P	5,623	-P,173	96	8,144	8,26P	-P,116	71
73EBA	79	18.	6,475	6,551	-P,P76	56	6,543	6,683	-P,14P	72
73EBF	8P	1P.	4,728	4,829	-P,1P8	126	5,78P	5,935	-P,147	73
71CAP	81	12.	7,183	6,433	P,67P	62	5,131	5,283	-P,151	74
73EGP	82	11.	4,154	4,513	-P,359	44	5,524	5,687	-P,163	75
73MCP	83	9.	3,481	4,352	-P,871	91	4,113	4,283	-P,17P	76
73LAP	84	7.	3,789	4,221	-P,432	13	6,P64	6,237	-P,173	77
77EC8	85	4.	5,846	6,2P6	-P,361	78	5,45P	5,623	-P,173	78
77EE8	86	25.	8,927	8,745	P,181	184	5,667	5,841	-P,174	79
77DC4	87	2.	6,73P	5,848	P,891	99	6,8P1	6,996	-P,196	8P
77D8A	88	25.	8,835	8,745	P,P91	52	5,264	5,493	-P,229	81
76AEA	89	22.	4,49P	4,P85	P,484	114	5,6P7	5,847	-P,239	82
73K1P	9P	4.	4,728	5,543	-P,815	181	4,692	5,135	-P,244	83
639AA	91	12.	4,113	4,283	-P,17P	85	4,784	5,P43	-P,258	84
63CA8	92	12.	4,357	4,283	P,P74	39	5,945	6,215	-P,27P	85
65B4A	93	11.	5,328	5,571	-P,P51	42	4,91P	5,183	-P,27P	86
81B9A	94	11.	5,153	4,351	P,802	2P	5,242	5,517	-P,275	87
61AAP	95	1P.	5,374	5,428	-P,P53	43	5,177	5,464	-P,287	88
61A8P	96	8.	5,319	5,237	P,082	25	3,924	4,212	-P,288	89
61ACP	97	1P.	5,319	5,691	-P,372	119	4,P11	4,312	-P,3P1	9P
72AAP	98	39.	4,144	8,26P	-P,11P	8	4,546	4,851	-P,3P5	91
72ACP	99	26.	6,8P1	6,99P	-P,1P6	6	7,832	8,181	-P,349	92
71CAP	1PP	1P.	4,243	4,99P	-P,787	1P9	4,P48	4,99P	-P,349	93
725A4	1P1	59.	4,892	5,135	-P,244	82	4,154	4,513	-P,359	94
72ECA	1P2	29.	5,799	5,463	P,336	6P	3,584	3,944	-P,36P	95
728PD	1P3	1P.	4,277	3,923	P,354	85	5,846	6,2P6	-P,361	96
71JAP	1P4	4.	5,667	5,841	-P,174	4P	5,PP4	5,448	-P,364	97
71LAP	1P5	4.	5,2PP	5,465	-P,365	97	5,319	5,691	-P,372	98
72DNP	1P6	7.	4,845	5,356	-P,511	185	5,PPP	5,465	-P,365	99
72AC8	1P7	4.	5,55P	5,329	P,321	118	5,245	5,649	-P,4P4	1PP
71715	1P8	8.	7,235	7,842	P,193	84	3,789	4,221	-P,432	1P1
71315	1P9	11.	4,648	4,998	-P,349	128	6,478	7,34P	-P,462	1P2
72BFP	11P	8.	5,697	5,618	-P,P11	47	6,394	6,867	-P,473	1P3
72PPP	111	15.	7,3P4	6,99P	P,314	112	7,P32	7,597	-P,474	1P4
71JCE	112	22.	7,P32	7,597	-P,474	1P6	4,846	5,356	-P,511	1P5
72CCP	114	3.	5,697	5,847	-P,239	35	7,177	7,7P8	-P,531	1P6
71Z48	115	4.	6,9P9	6,135	P,854	33	5,344	5,9P1	-P,557	1P7
71Z8P	116	15.	7,477	7,P66	P,41P	89	5,137	5,697	-P,56P	1P8
71ZDP	117	21.	8,442	8,131	P,311	74	6,3P3	6,932	-P,589	1P9
65B4A	118	9.	5,245	5,649	-P,4P4	36	4,84P	5,429	-P,589	11P
63AFP	119	11.	4,911	4,312	-P,3P1	1	5,P9P	5,732	-P,637	111
63AA2	12P	6.	4,938	5,922	-P,P86	16	7,293	7,941	-P,648	112
63121	121	11.	4,7P4	4,361	P,343	3P	5,19P	5,859	-P,67P	113
63AAA	122	1P.	5,679	5,472	P,2P8	59	5,166	5,843	-P,677	114
55ALP	123	1P.	5,973	4,99P	P,983	84	4,359	5,043	-P,683	115
55AVP	124	1P.	4,459	4,476	-P,P17	18P	4,243	4,95P	-P,727	116
61AAP	125	8.	5,51P	5,577	-P,P67	34	4,765	5,5P1	-P,736	117
61AEP	126	17.	5,78P	5,935	-P,147	9P	4,728	5,543	-P,815	118
62AA8	127	7.	6,562	5,711	P,851	83	3,4P1	4,352	-P,871	119
64211	128	18.	6,87P	7,34P	-P,462	88	7,285	8,147	-P,86P	12P

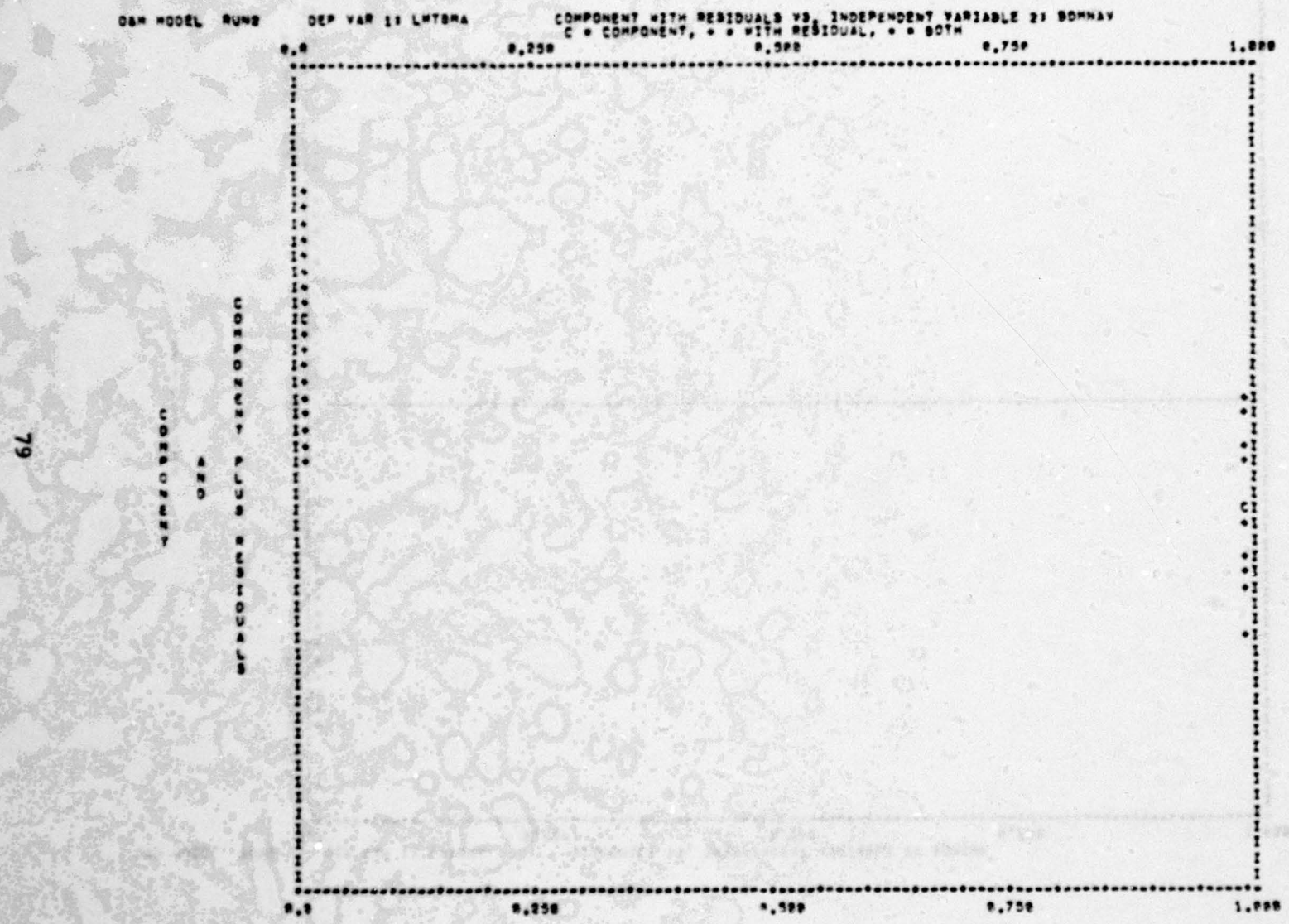

G&M MODEL RUN2
DEP VAR IS LNTSMA
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID

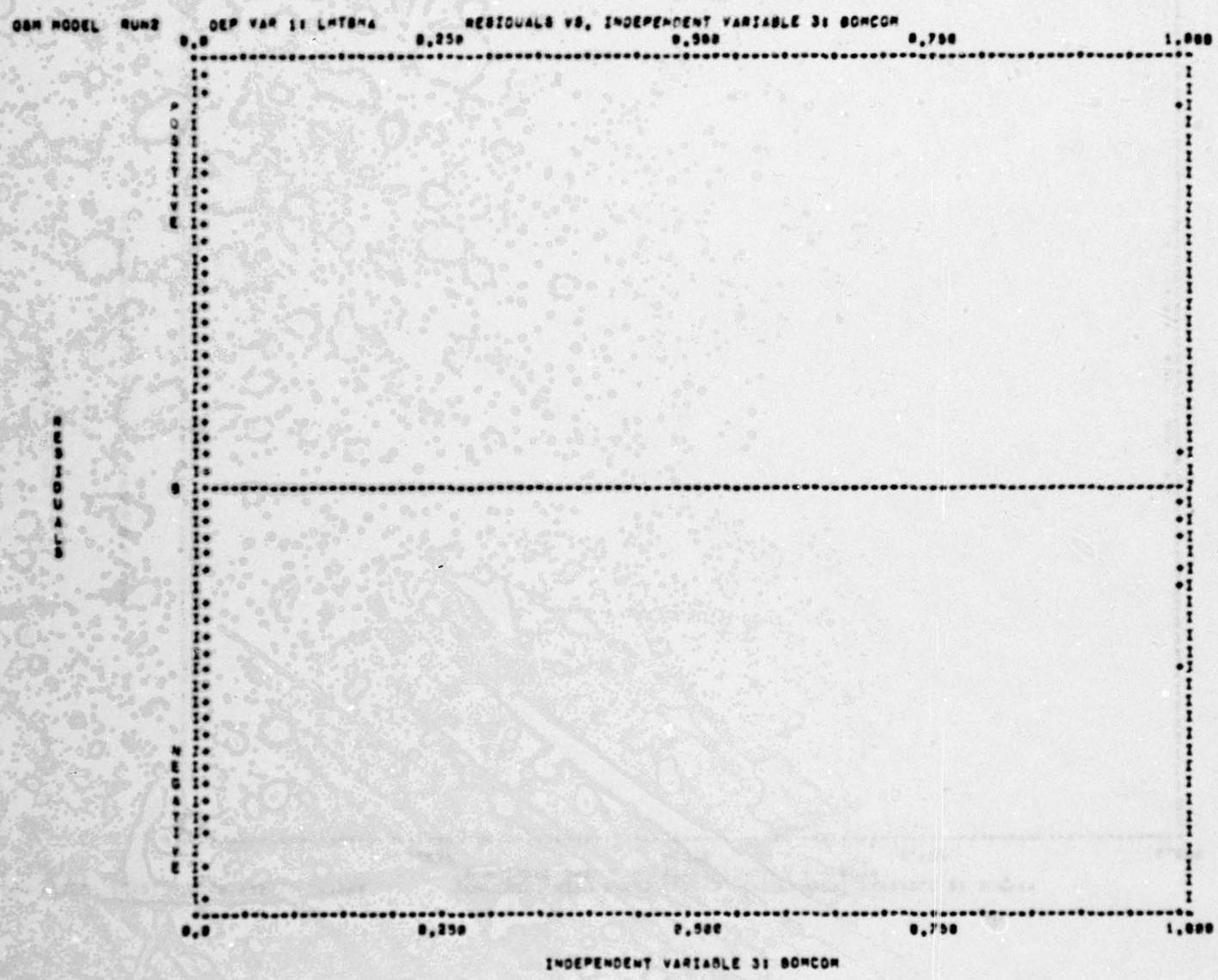

O&M MODEL RUN2
DEP VAR 1: LMTBMA
RESIDUAL VS. FITTED Y
3.858
6.297
8.745
POSITIVE
0
NEGATIVE
SPACINGER
3.858
6.297
8.745
FITTED Y

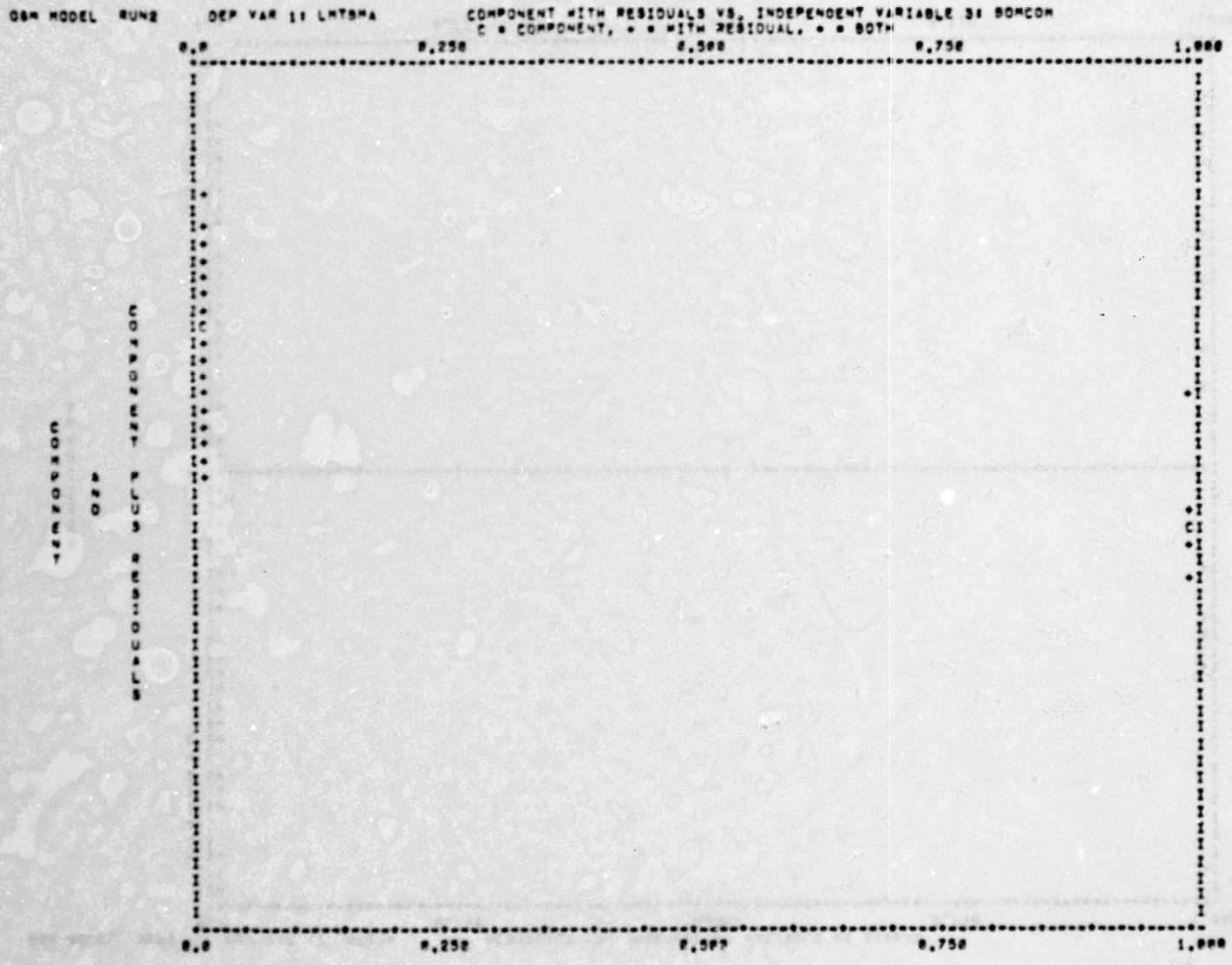

O&M MODEL RUN2 DEP VAR IS LNTOMA RESIDUALS VS. INDEPENDENT VARIABLE IS FIGCOM
0.0
0.250
0.500
0.750
1.000
POSITIVE
0
NEGATIVE
RESIDUALS
INDEPENDENT VARIABLE IS FIGCOM

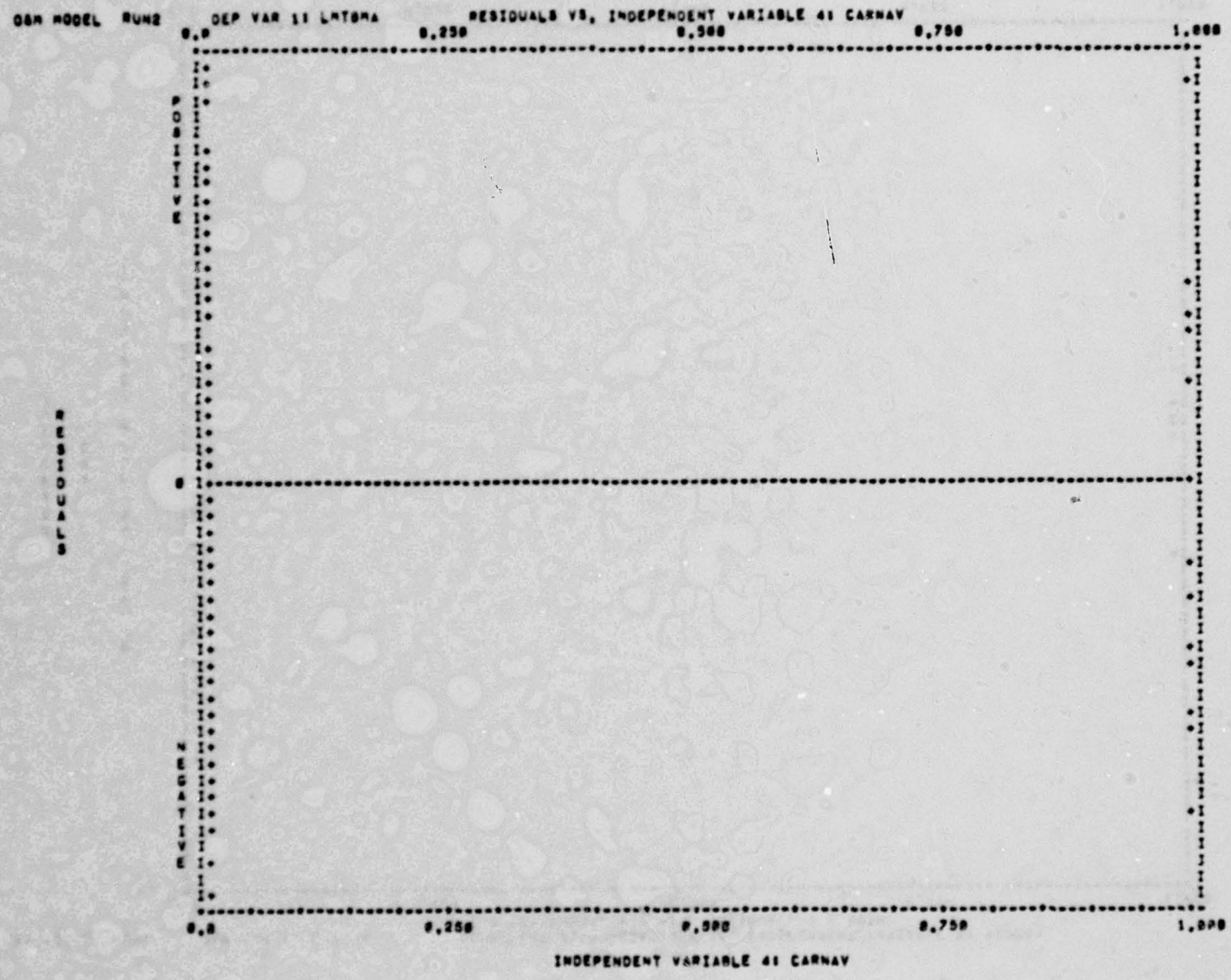

Q&H MODEL RUN2 DEP VAR 1: LMTBMA COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE 1: FIGCOM
C = COMPONENT, * = WITH RESIDUAL, @ = BOTH
0.0
0.250
0.500
0.750
1.000
COMPONENT PLUS RESIDUAL AND COMPONENT
INDEPENDENT VARIABLE 1: FIGCOM
0 RESIDUALS OUTSIDE OF PLOT

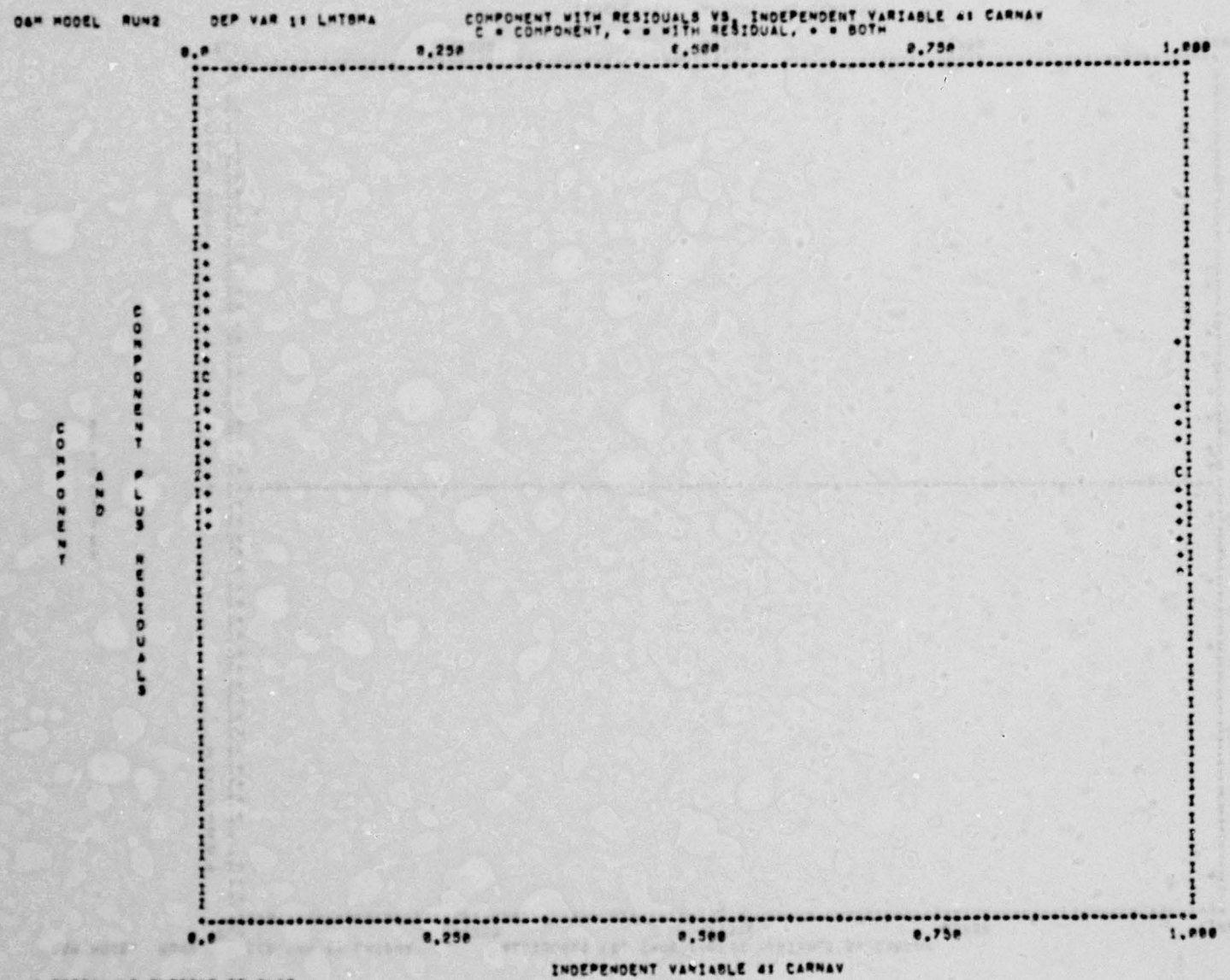

GAM MODEL RUN2 DEP VAR 1: LNTBMX RESIDUALS VS. INDEPENDENT VARIABLE 2: BOMNAV
0.0
0.250
0.500
0.750
1.000
POSITIVE
RESIDUAL
0
NEGATIVE
INDEPENDENT VARIABLE 2: BOMNAV


C&H MODEL RUN8 DEP VAR 11 LMTBMA
COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE 21 BOMNAV
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
0.0
0.250
0.500
0.750
1.000
COMPONENT PLUS RESIDUALS
AND
COMPONENT
INDEPENDENT VARIABLE 21 BOMNAV
0 RESIDUALS OUTSIDE OF PLOT

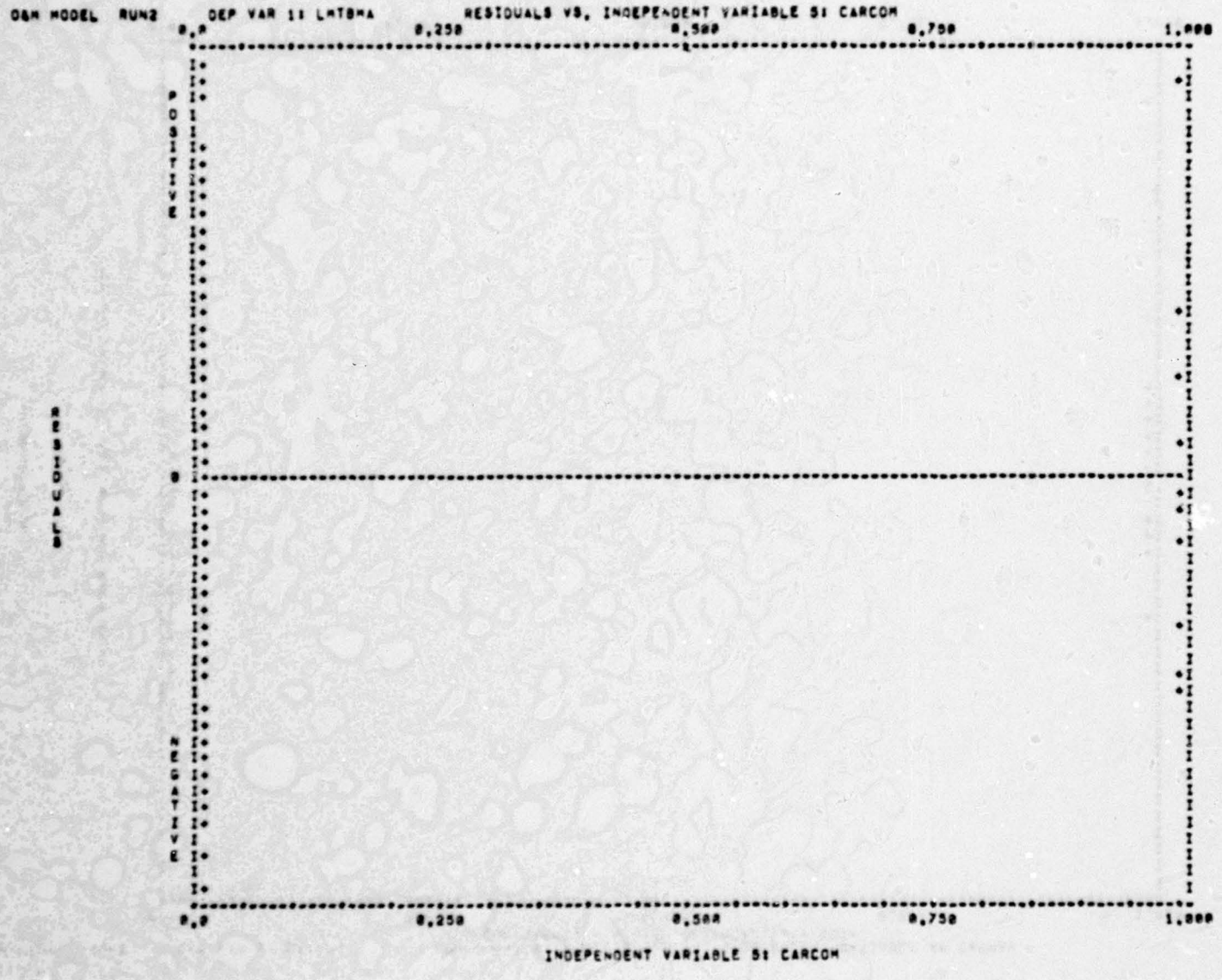

OSM MODEL RUN2 DEP VAR 1: LMTBM4 RESIDUALS VS. INDEPENDENT VARIABLE 3: BOMCOM
0.0
0.250
0.500
0.750
1.000
POSITIVE
RESIDUALS
0
NEGATIVE
INDEPENDENT VARIABLE 3: BOMCOM

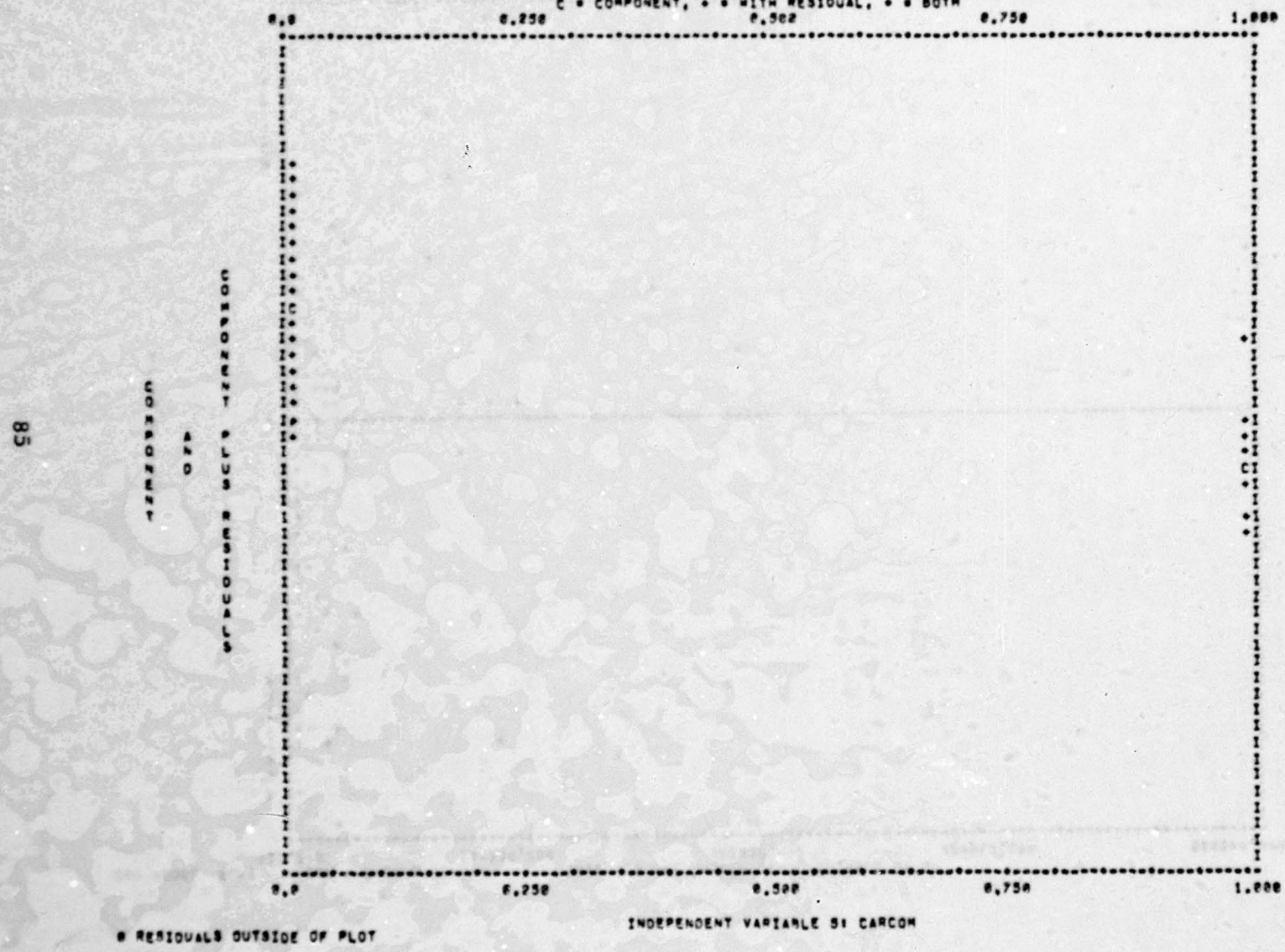

GBM MODEL RUN2 DEP VAR 1: LNTSMA COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE 3: BOMCOM
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
0.0
0.250
0.500
0.750
1.000
COMPONENT PLUS RESIDUALS
COMPONENT AND
INDEPENDENT VARIABLE 3: BOMCOM
0 RESIDUALS OUTSIDE OF PLOT

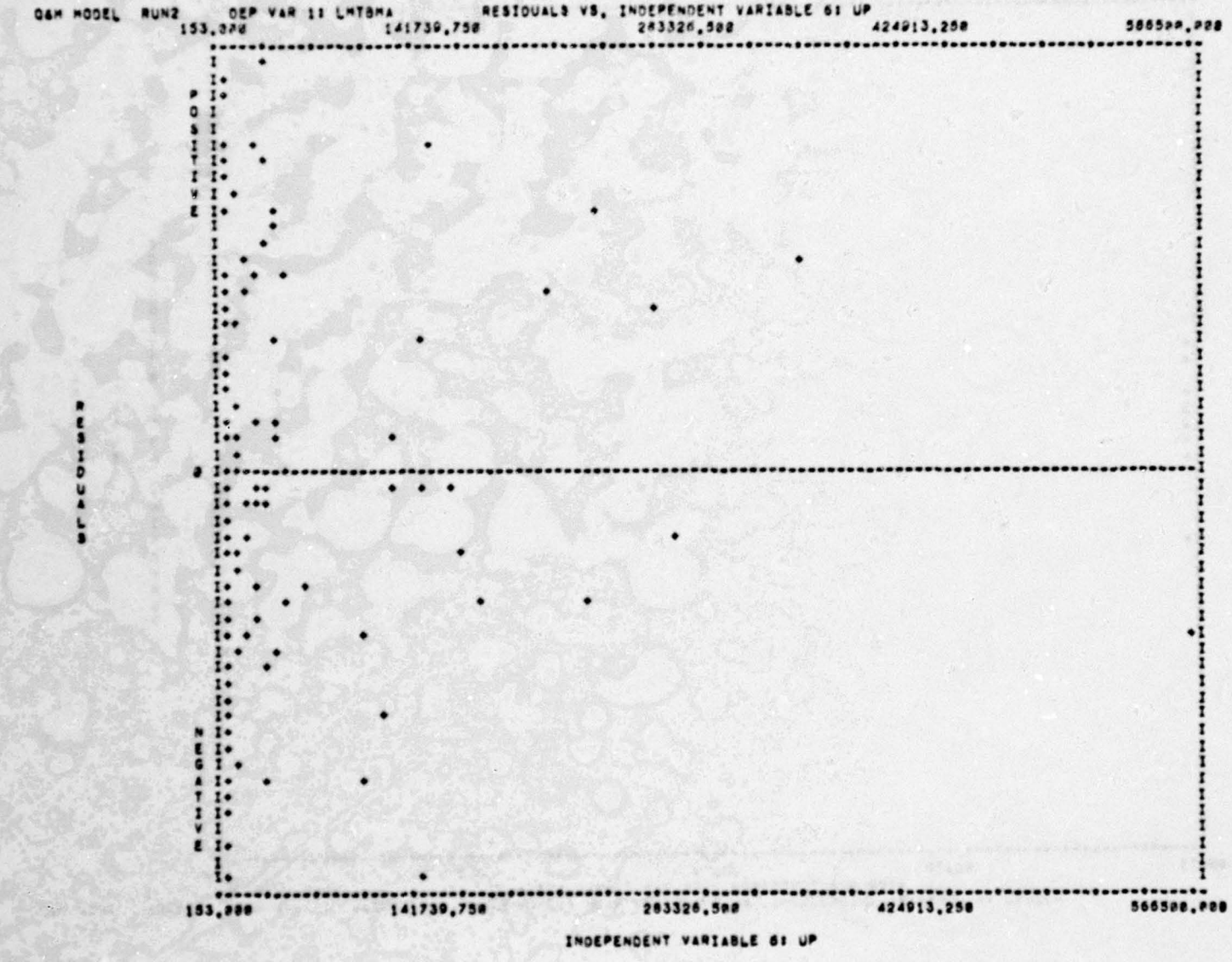

OSR MODEL RUN2 DEP VAR 11 LNTBMA RESIDUALS VS, INDEPENDENT VARIABLE 41 CARNAV
0.0
0.250
0.500
0.750
1.000
POSITIVE
RESIDUALS
0
NEGATIVE
0.0
0.250
0.500
0.750
1.000
INDEPENDENT VARIABLE 41 CARNAV

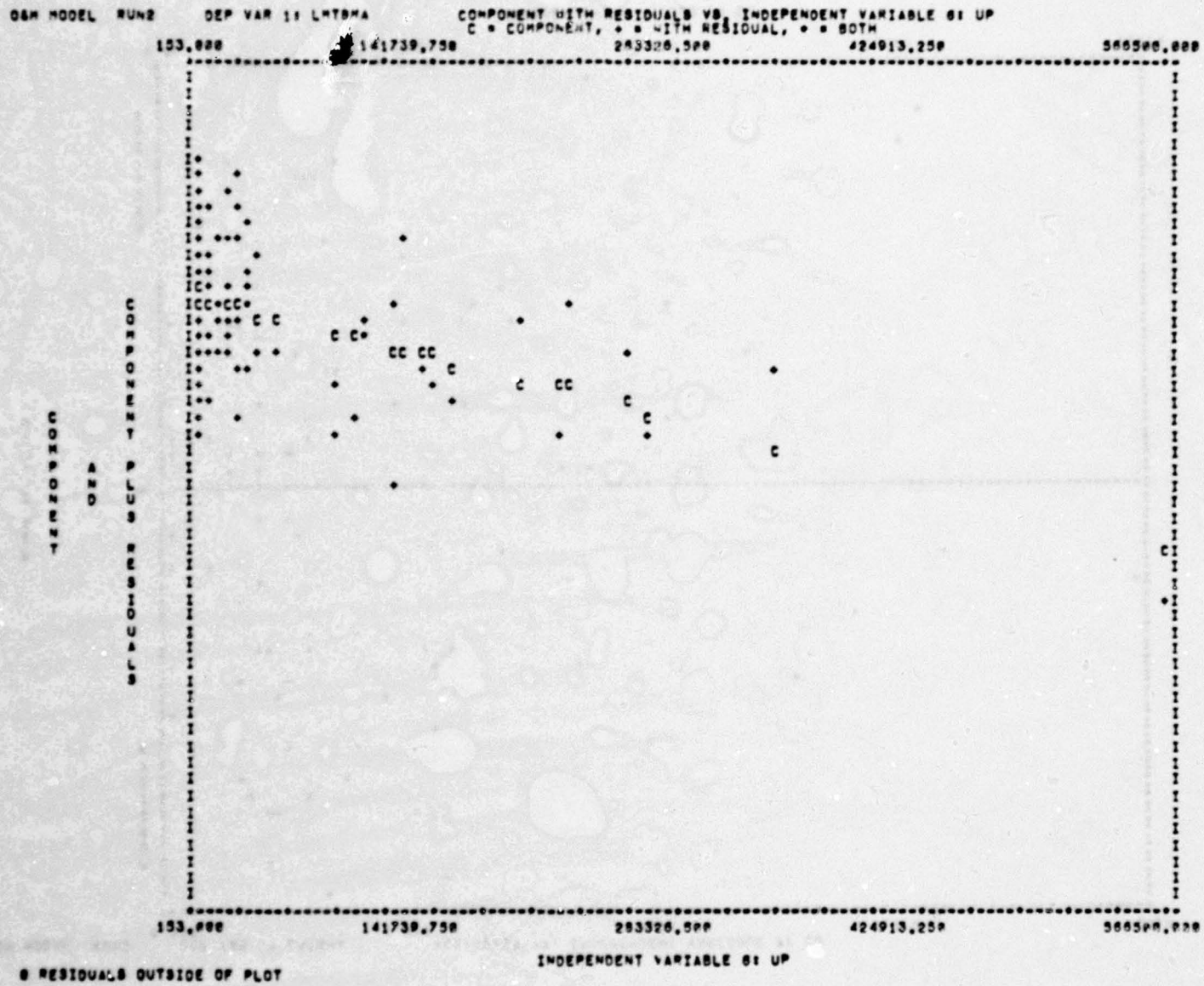


0 RESIDUALS OUTSIDE OF PLOT

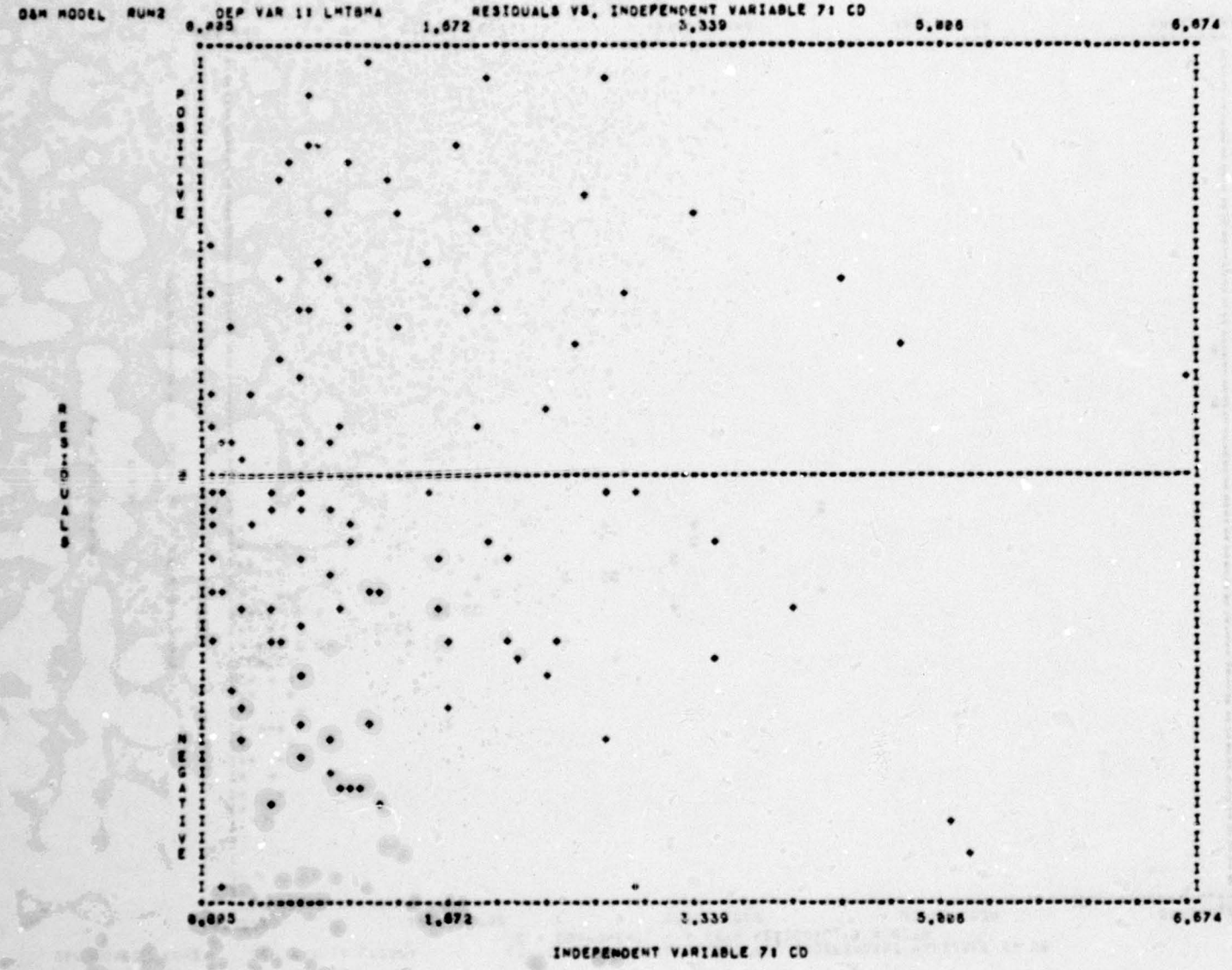

O&M MODEL RUN2 DEP VAR IS LNTBMA RESIDUALS VS. INDEPENDENT VARIABLE IS CARCOM
0.0
0.250
0.500
0.750
1.000
POSITIVE
RESIDUALS
0
NEGATIVE
INDEPENDENT VARIABLE IS CARCOM

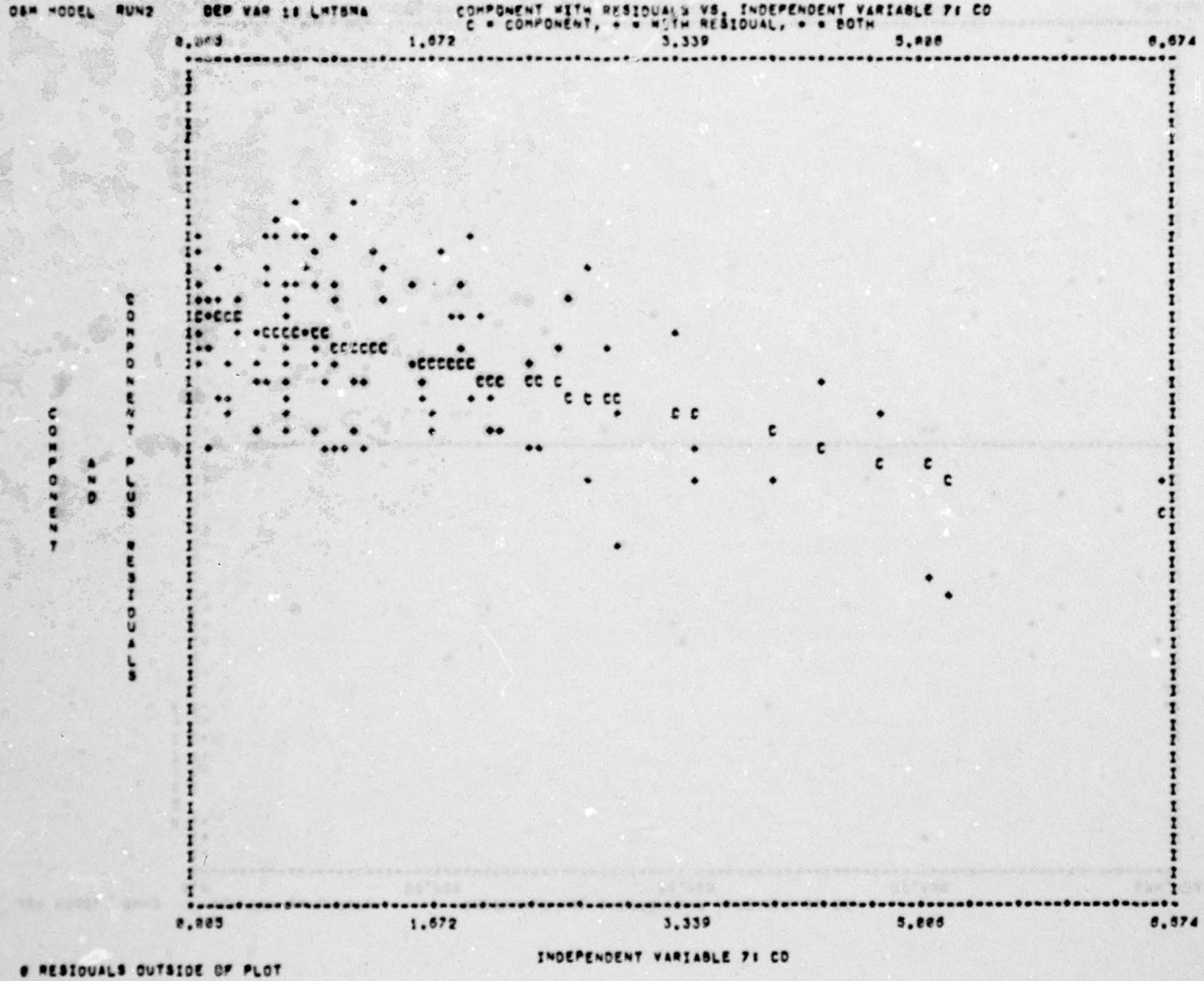

O&M MODEL RUN2 DEP VAR IS LMTBMA COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE IS CARCOM
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
0.0
0.250
0.500
0.750
1.000
COMPONENT AND COMPONENT PLUS RESIDUALS
INDEPENDENT VARIABLE IS CARCOM
* RESIDUALS OUTSIDE OF PLOT


Q&M MODEL RUN2 DEP VAR 11 LMTBMA RESIDUALS VS. INDEPENDENT VARIABLE 61 UP
153,000
141739,750
283326,500
424913,250
566500,000
RESIDUALS
INDEPENDENT VARIABLE 61 UP



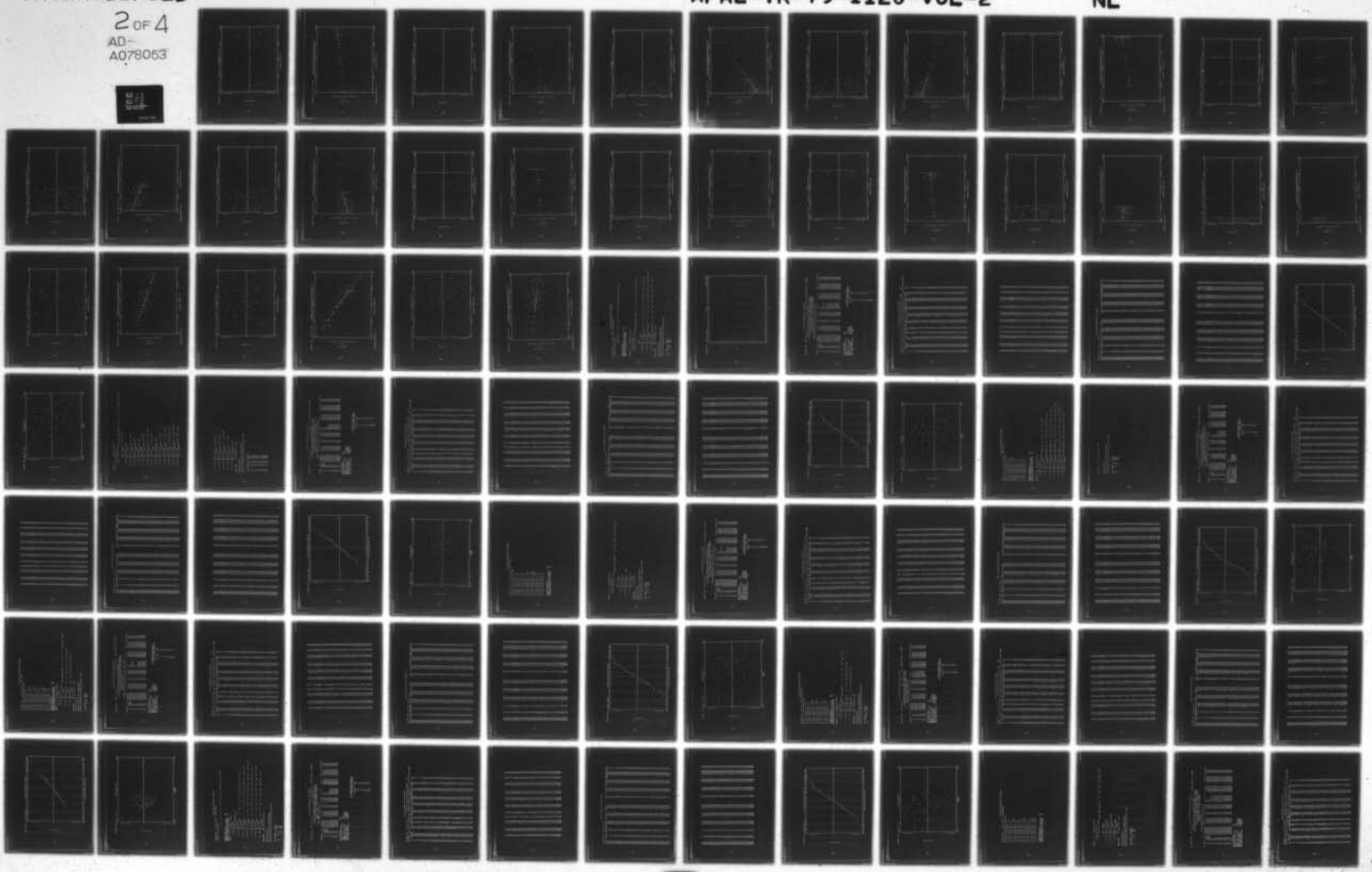
0 RESIDUALS OUTSIDE OF PLOT

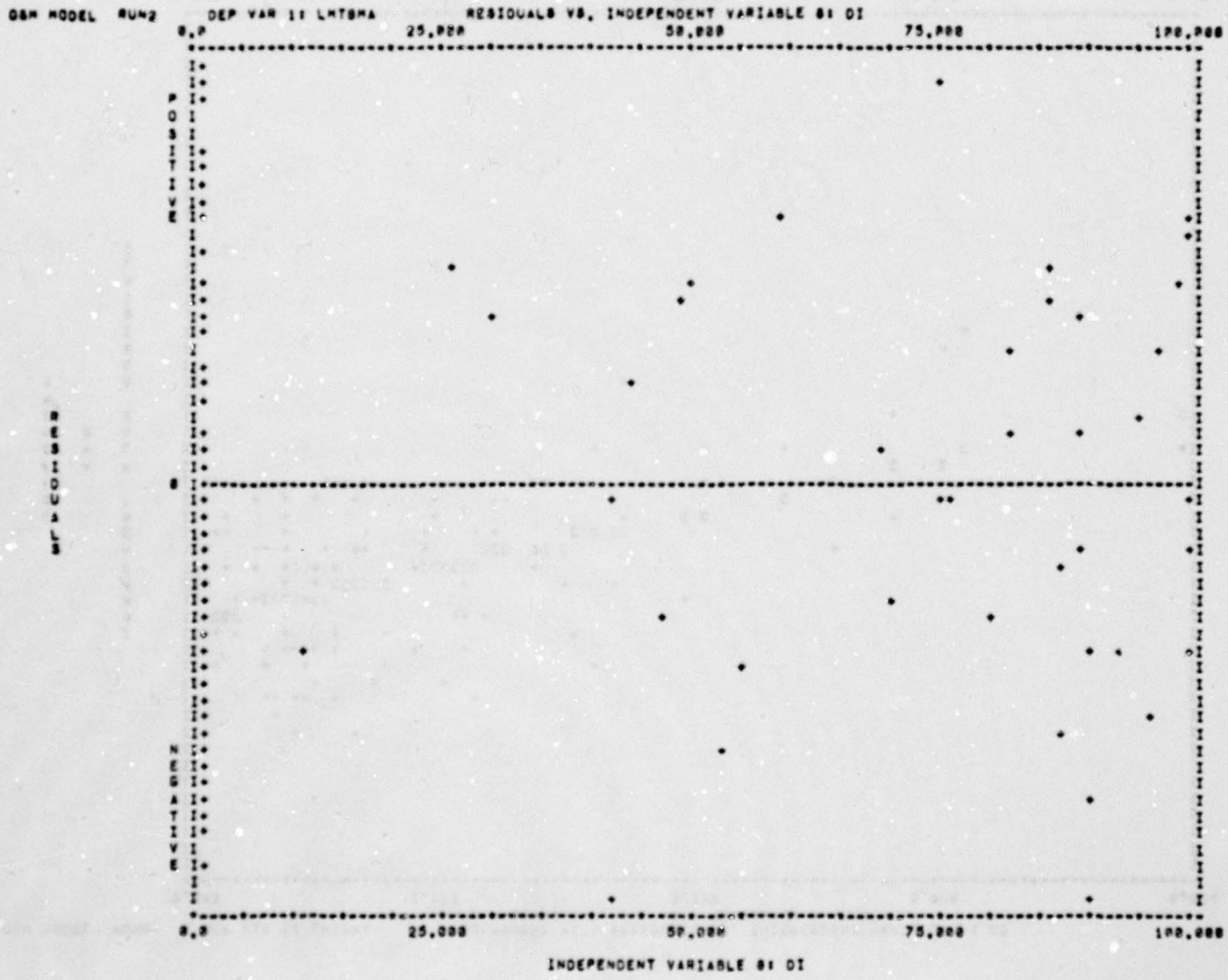

D&M MODEL RUN2 DEP VAR IS LMTSMA RESIDUALS VS. INDEPENDENT VARIABLE IS CD
0.005
1.672
3.339
5.006
6.674
POSITIVE
RESIDUALS
0
NEGATIVE
INDEPENDENT VARIABLE IS CD

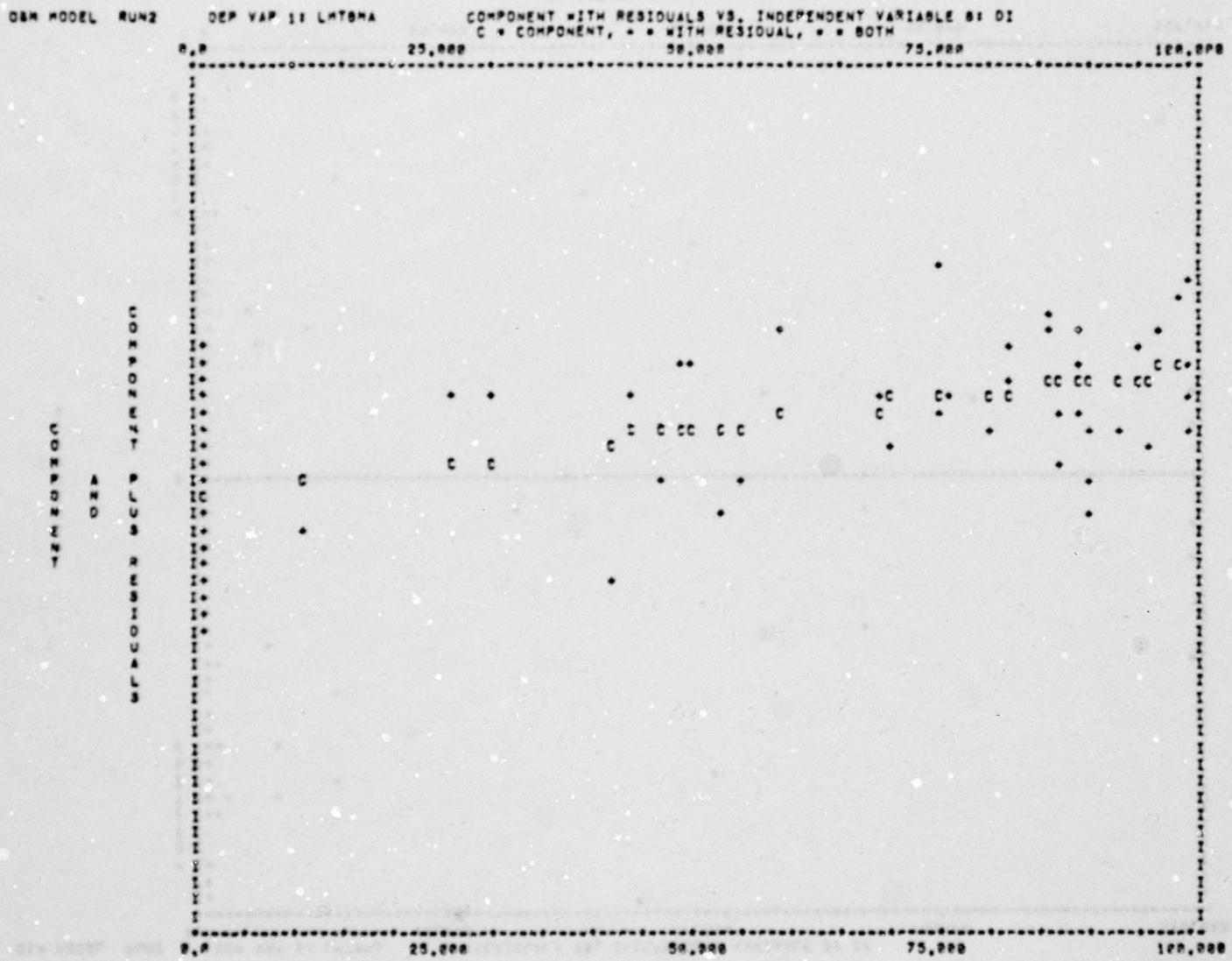

O&M MODEL RUN2 DEP VAR IS LNTSNA COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE IS CO
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
0.003
1.672
3.339
5.006
6.674
COMPONENT AND COMPONENT PLUS RESIDUALS
INDEPENDENT VARIABLE IS CO
0 RESIDUALS OUTSIDE OF PLOT

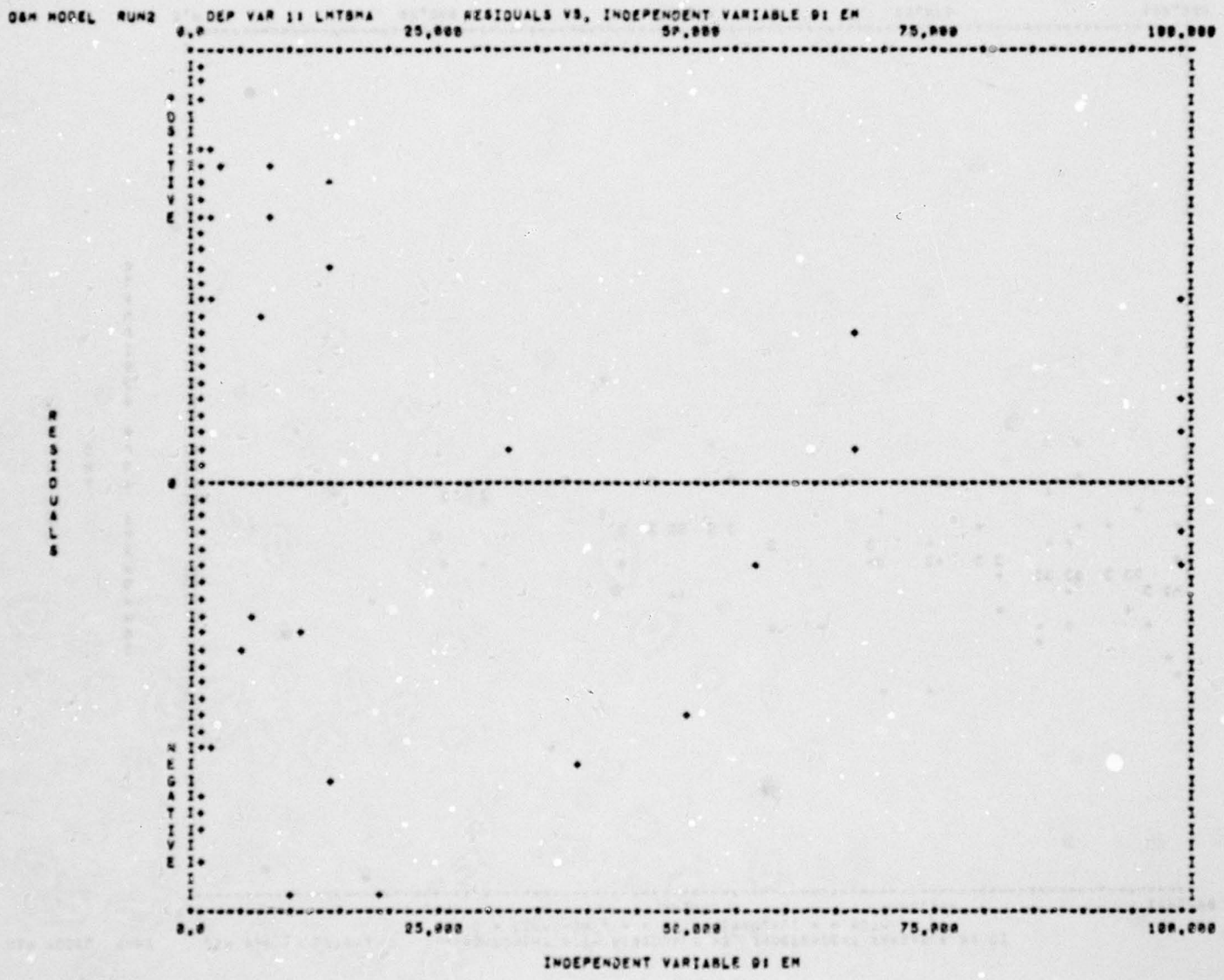
AD-A078 053 WESTINGHOUSE ELECTRIC CORP HUNT VALLEY MD F/G 14/1
PREDICTIVE OPERATIONS AND MAINTENANCE COST MODEL. VOLUME II.(U)
AUG 79 E E FELTUS F33615-77-C-1105
UNCLASSIFIED AFAL-TR-79-1120-VOL-2 NL

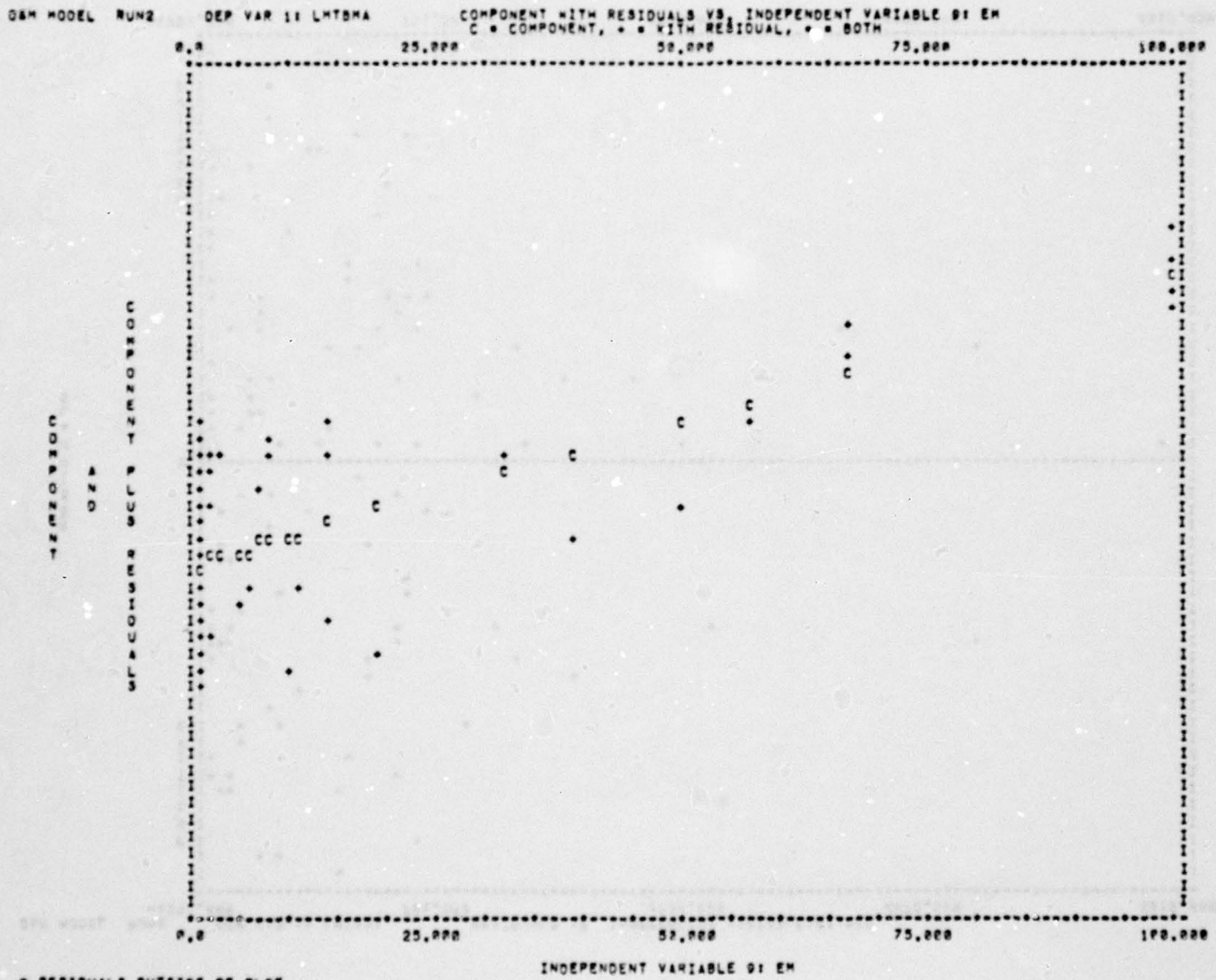
2 OF 4
AD-
A078053

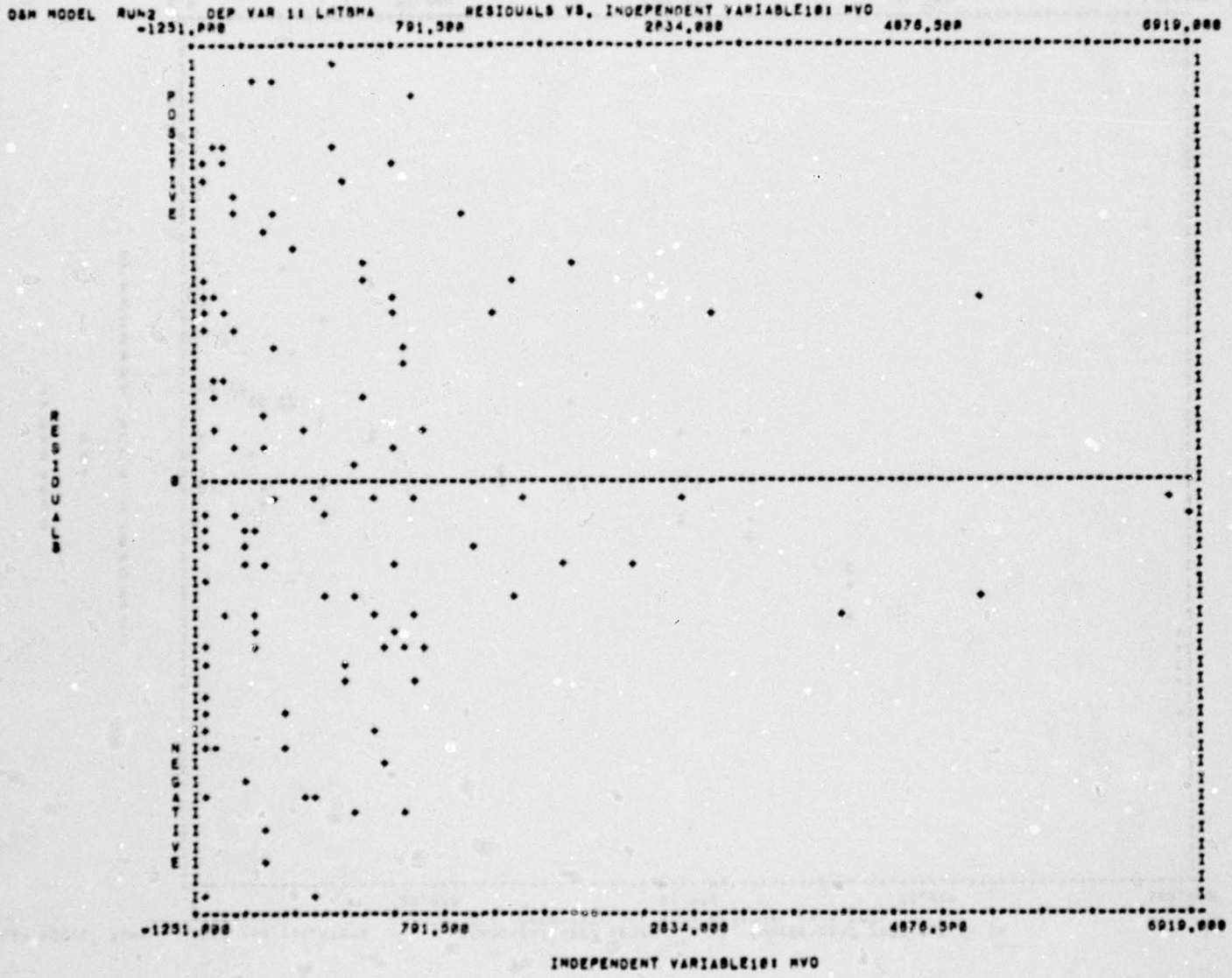


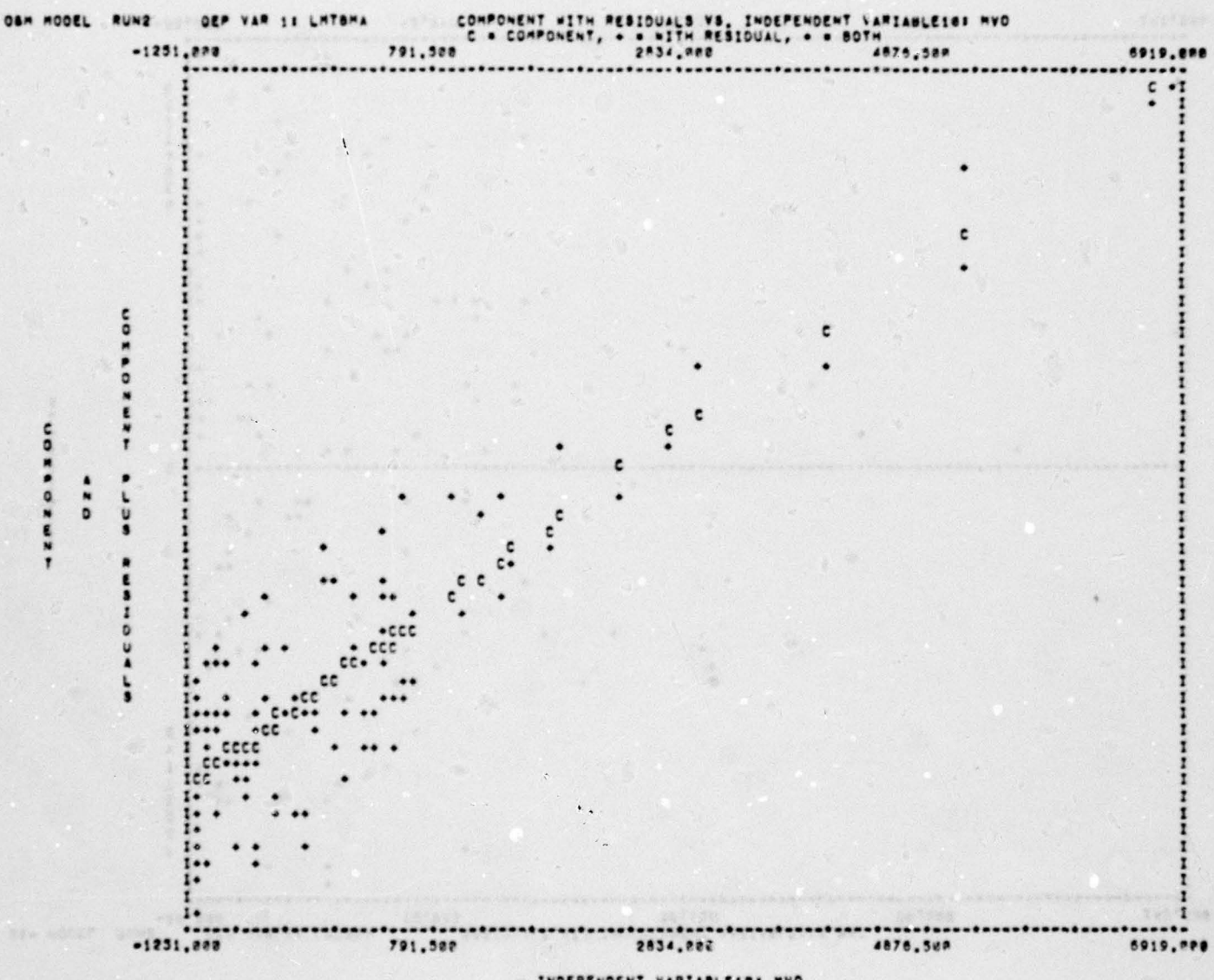

G&M MODEL RUN2 DEP VAR IS LNTSMA RESIDUALS VS. INDEPENDENT VARIABLE #1 DI
0.0
25,000
50,000
75,000
100,000
POSITIVE
RESIDUALS
0
NEGATIVE
INDEPENDENT VARIABLE #1 DI

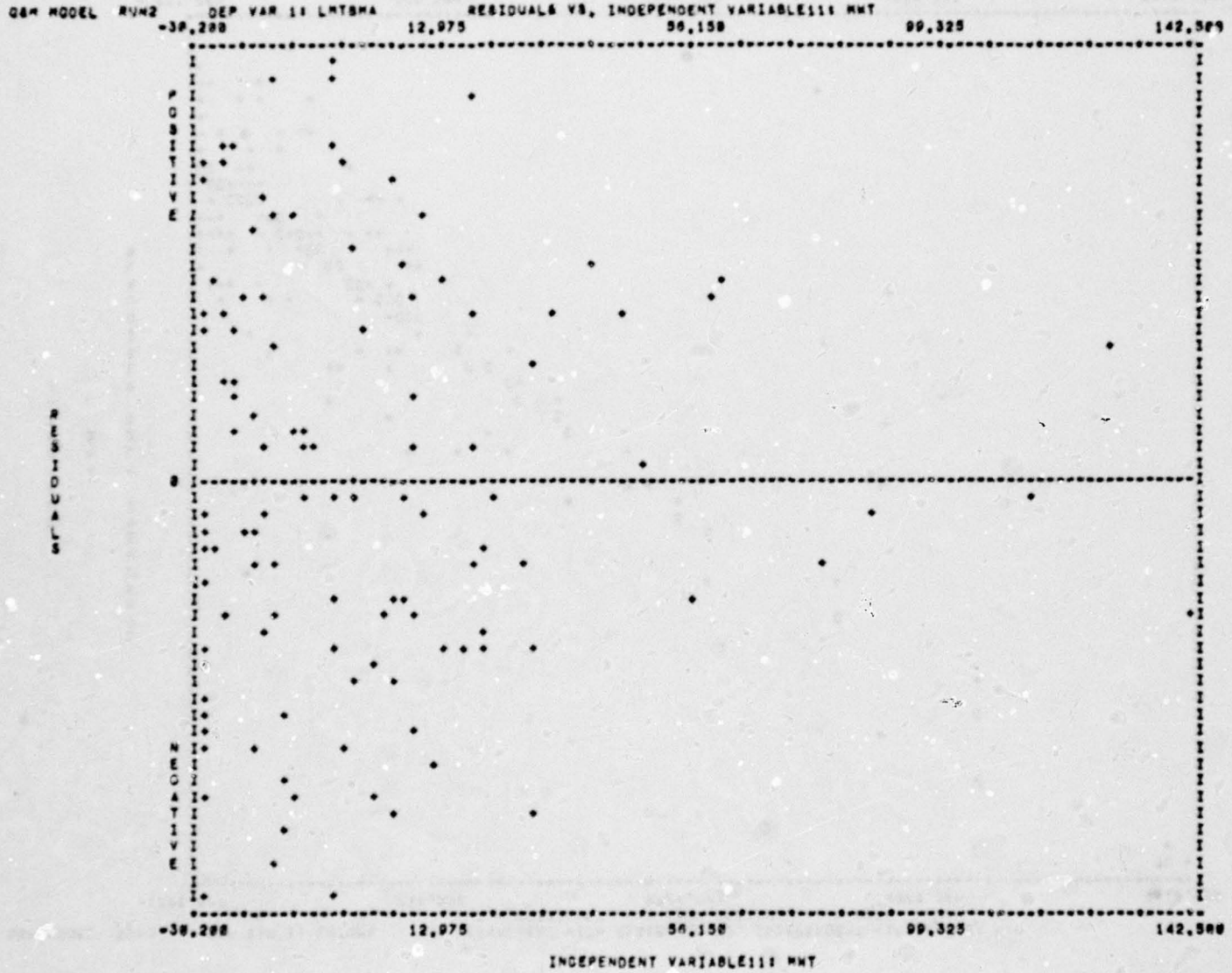

O&M MODEL RUN2 DEP VAR IS LMTBMA
COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE IS DI
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
0.0
25,000
50,000
75,000
100,000
COMPONENT AND COMPONENT PLUS RESIDUALS
INDEPENDENT VARIABLE IS DI
0 RESIDUALS OUTSIDE OF PLOT

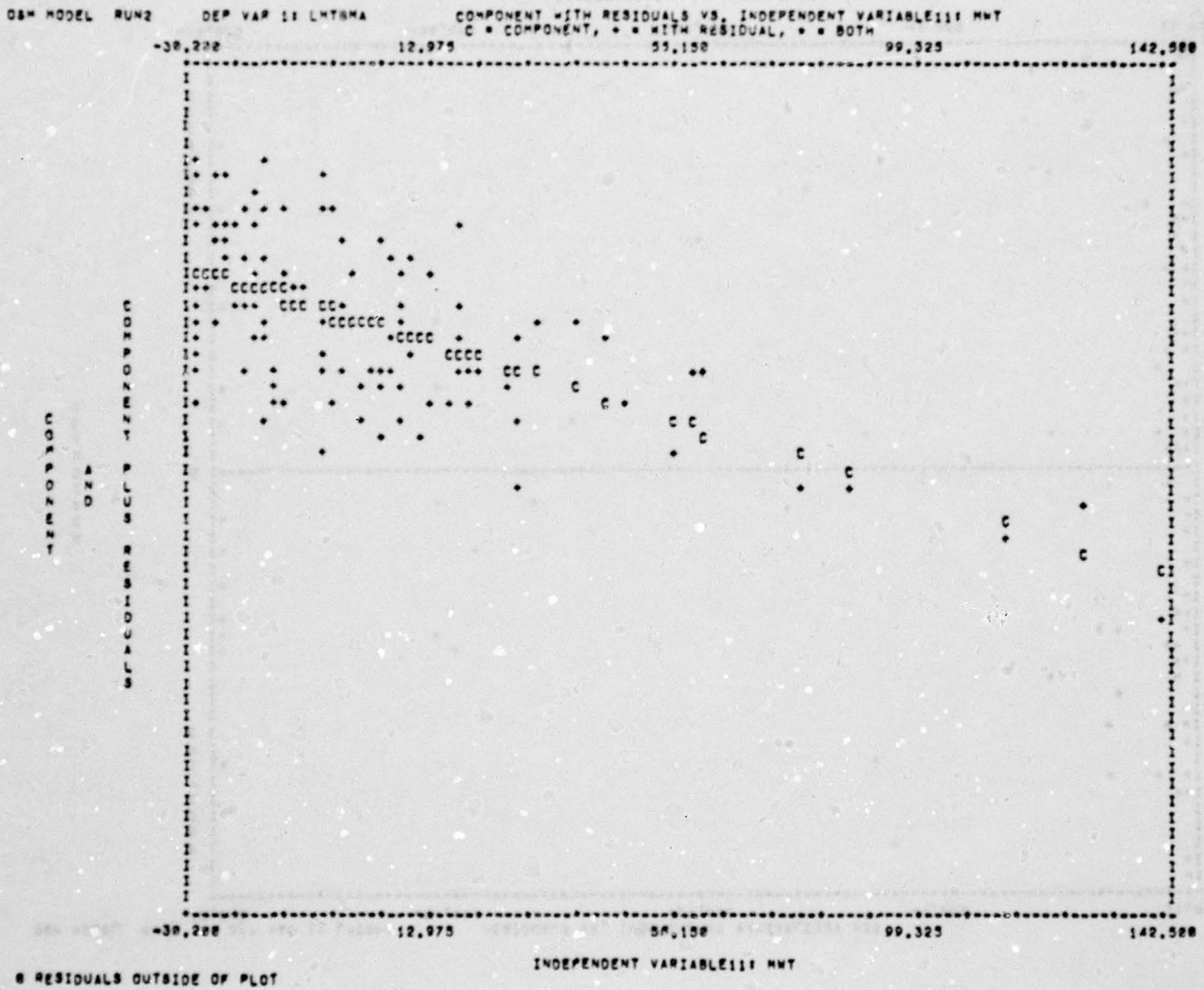

D&M MODEL RUN2 DEP VAR 1: LMTSMA RESIDUALS VS. INDEPENDENT VARIABLE 91: EM
0.0
25,000
50,000
75,000
100,000
RESIDUALS
POSITIVE
0
NEGATIVE
INDEPENDENT VARIABLE 91: EM


O&M MODEL RUN2 DEP VAR 1: LMTBMA
COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE 9: EM
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
0.0
25,000
50,000
75,000
100,000
COMPONENT AND COMPONENT PLUS RESIDUALS
INDEPENDENT VARIABLE 9: EM
0 RESIDUALS OUTSIDE OF PLOT

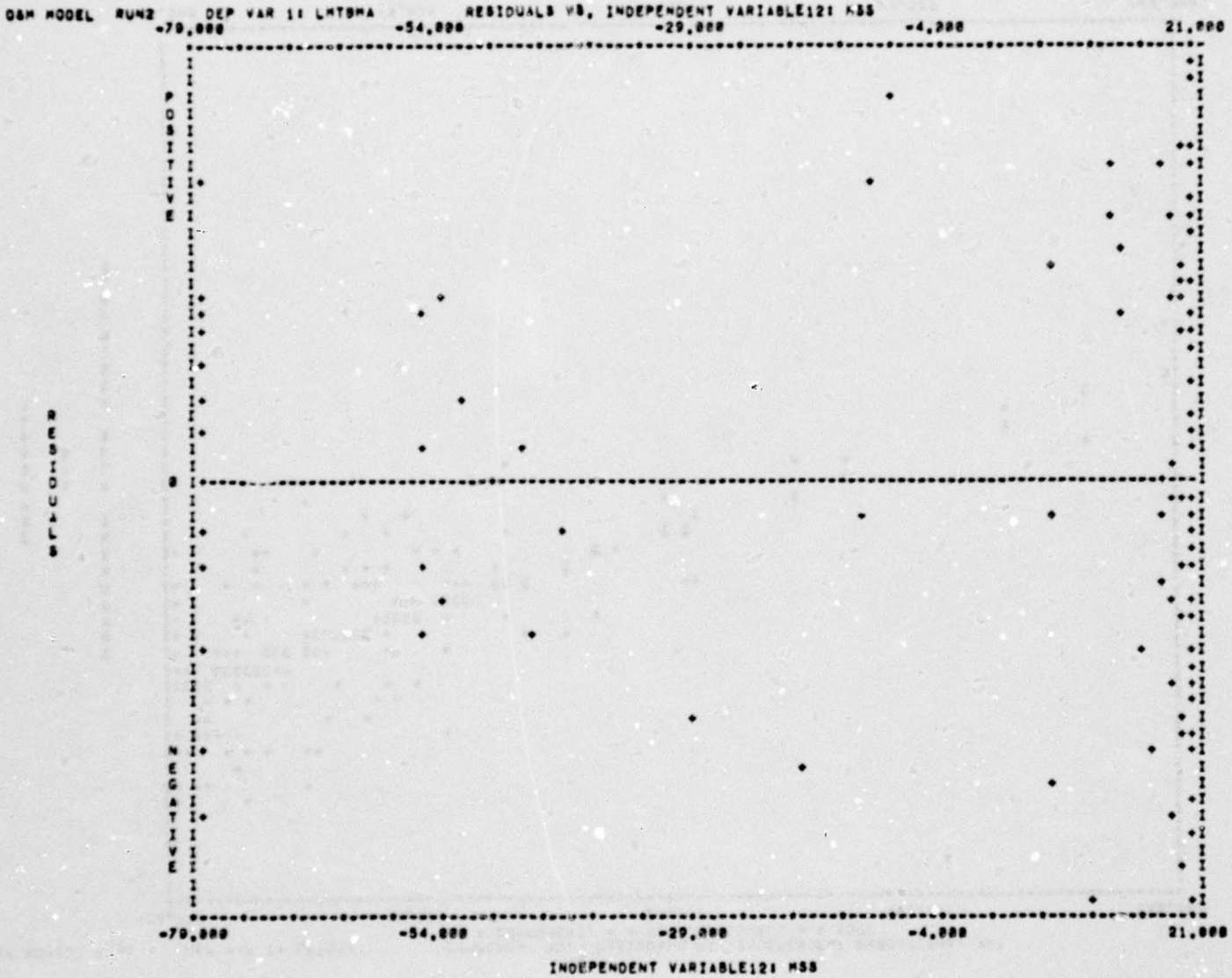

D&M MODEL RUN2 DEP VAR 1: LMTBMA RESIDUALS VS. INDEPENDENT VARIABLE10: MVO
-1251,000
791,500
2834,000
4876,500
6919,000
POSITIVE
0
NEGATIVE
RESIDUALS
INDEPENDENT VARIABLE10: MVO

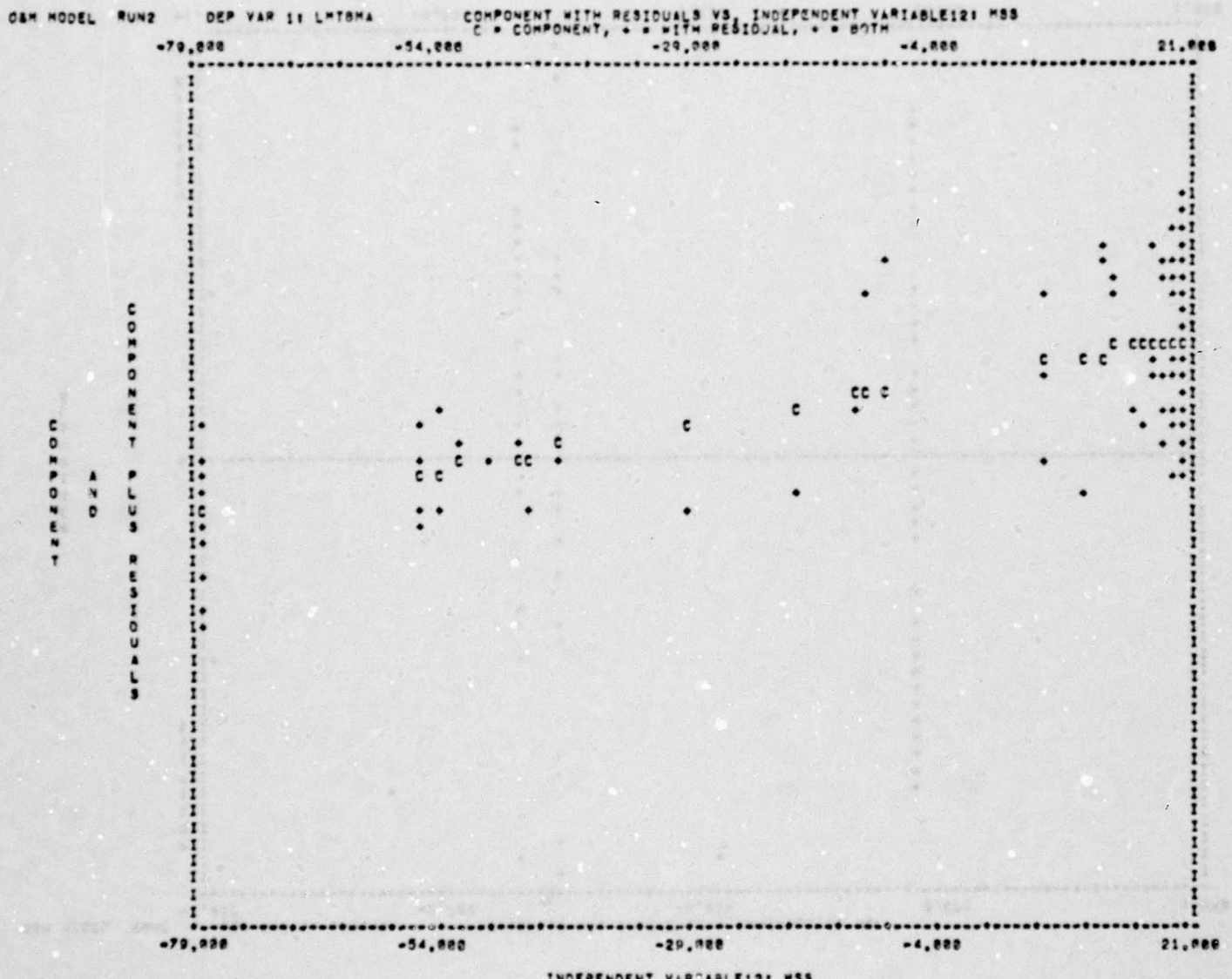

O&M MODEL RUN2 DEP VAR 1: LMTBMA COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE(S): MVO
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
-1231.000 791.500 2834.000 4876.500 6919.000
COMPONENT AND PLUS RESIDUALS
INDEPENDENT VARIABLE(S): MVO
0 RESIDUALS OUTSIDE OF PLOT

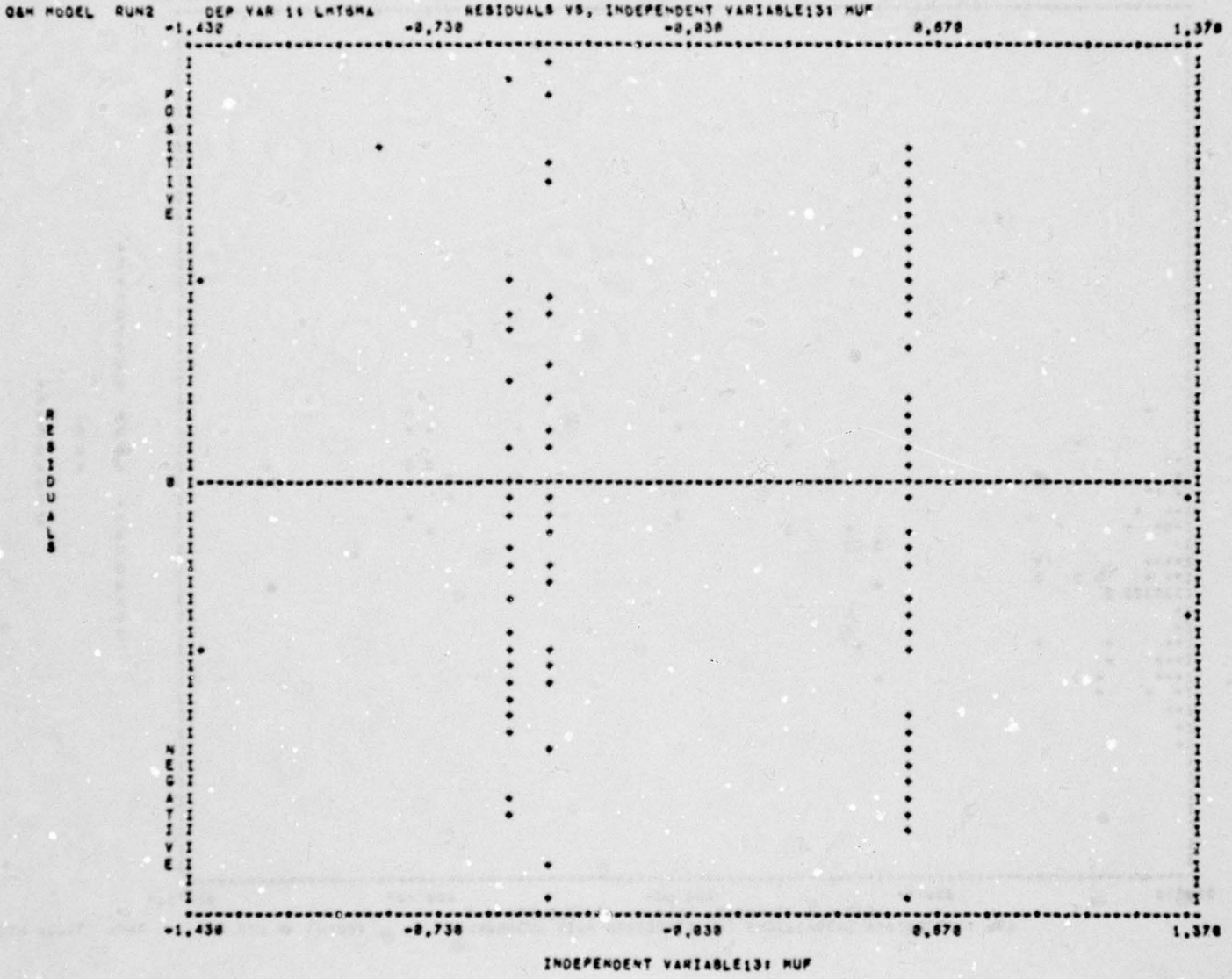

Q&M MODEL RUN2 DEP VAR 1: LNTSMA RESIDUALS VS. INDEPENDENT VARIABLE11: MNT
-38,288
12,975
56,150
99,325
142,500
POSITIVE
0
NEGATIVE
RESIDUALS
INDEPENDENT VARIABLE11: MNT



6 RESIDUALS OUTSIDE OF PLOT

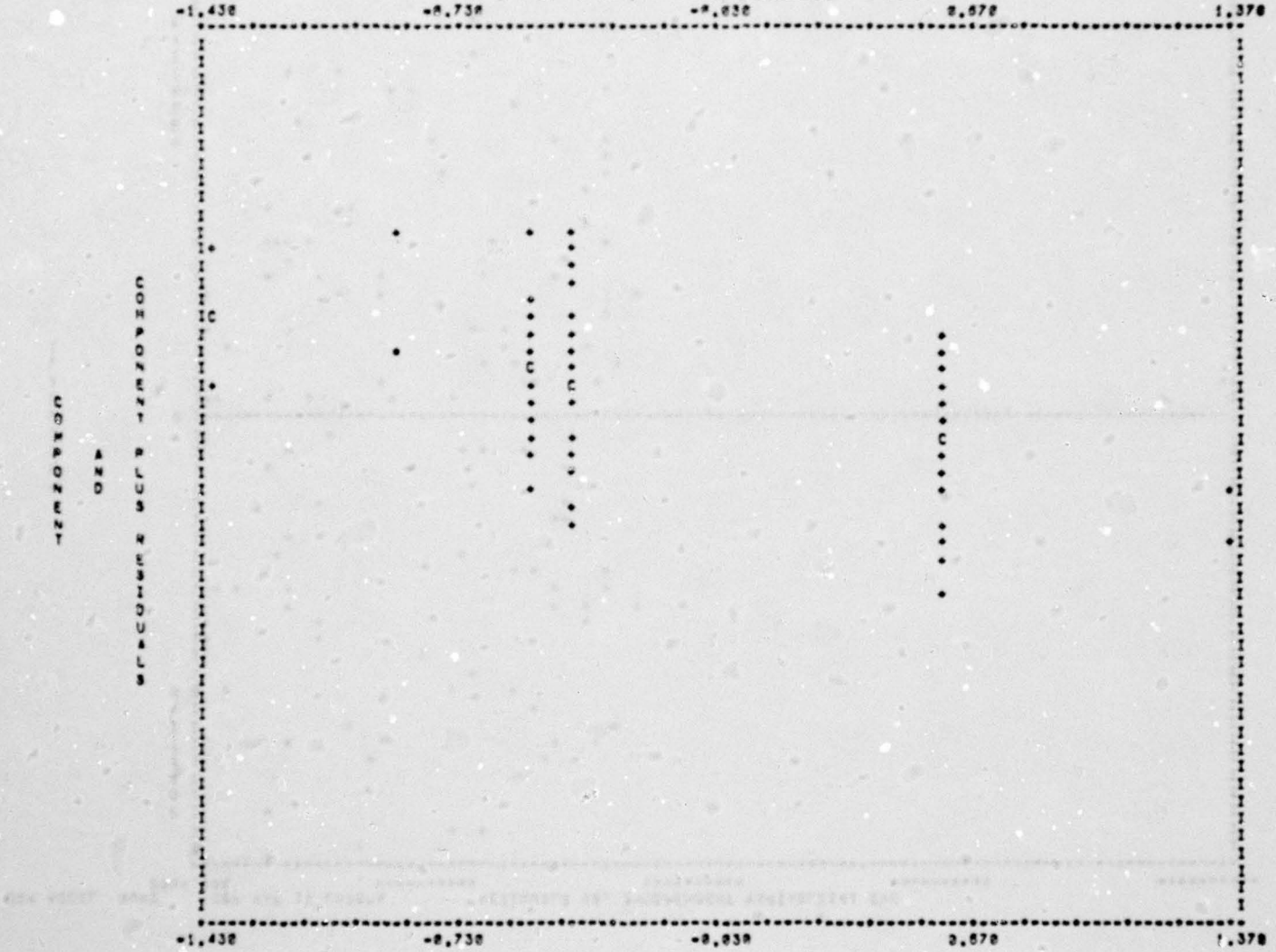

G&M MODEL RUN2 DEP VAR 1: LMTBMA RESIDUALS VS. INDEPENDENT VARIABLE12: MSS
-79,000
-54,000
-29,000
-4,000
21,000
POSITIVE
RESIDUALS
0
NEGATIVE
INDEPENDENT VARIABLE12: MSS


O&M MODEL RUN2 DEP VAR 1: LMTBMA COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE12: MSS
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
-79,000
-54,000
-29,000
-4,000
21,000
COMPONENT PLUS RESIDUALS
AND
COMPONENT
INDEPENDENT VARIABLE12: MSS
0 RESIDUALS OUTSIDE OF PLOT


Q&M MODEL RUN2 DEP VAR IS LMTGMA RESIDUALS VS. INDEPENDENT VARIABLE(3) MUF
-1.432
-0.738
-0.038
0.678
1.378
POSITIVE
0
NEGATIVE
STANDARDIZED RESIDUALS
INDEPENDENT VARIABLE(3) MUF

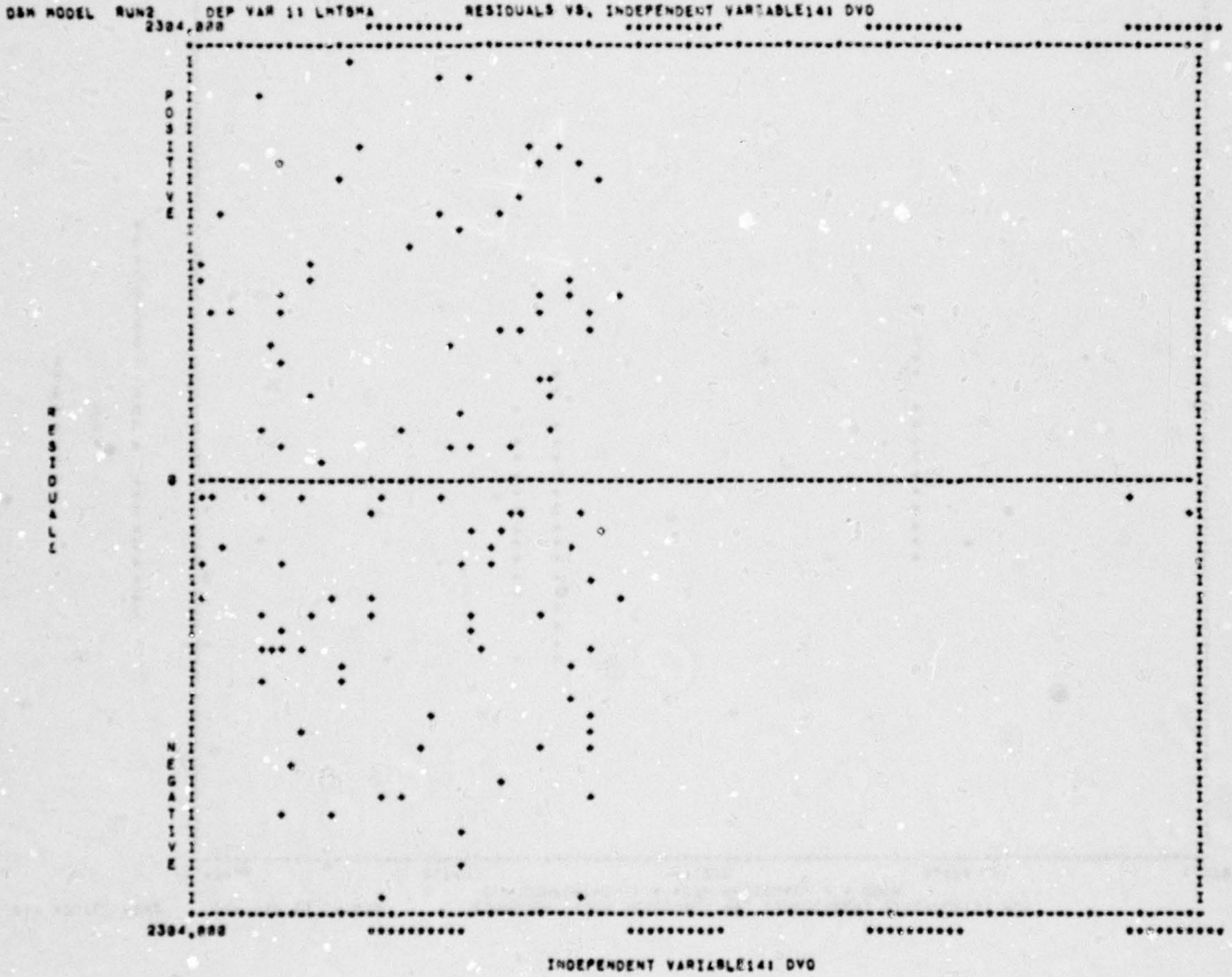
G&M MODEL RUN2 DEP VAR IS LMTBMA COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE13: MUF

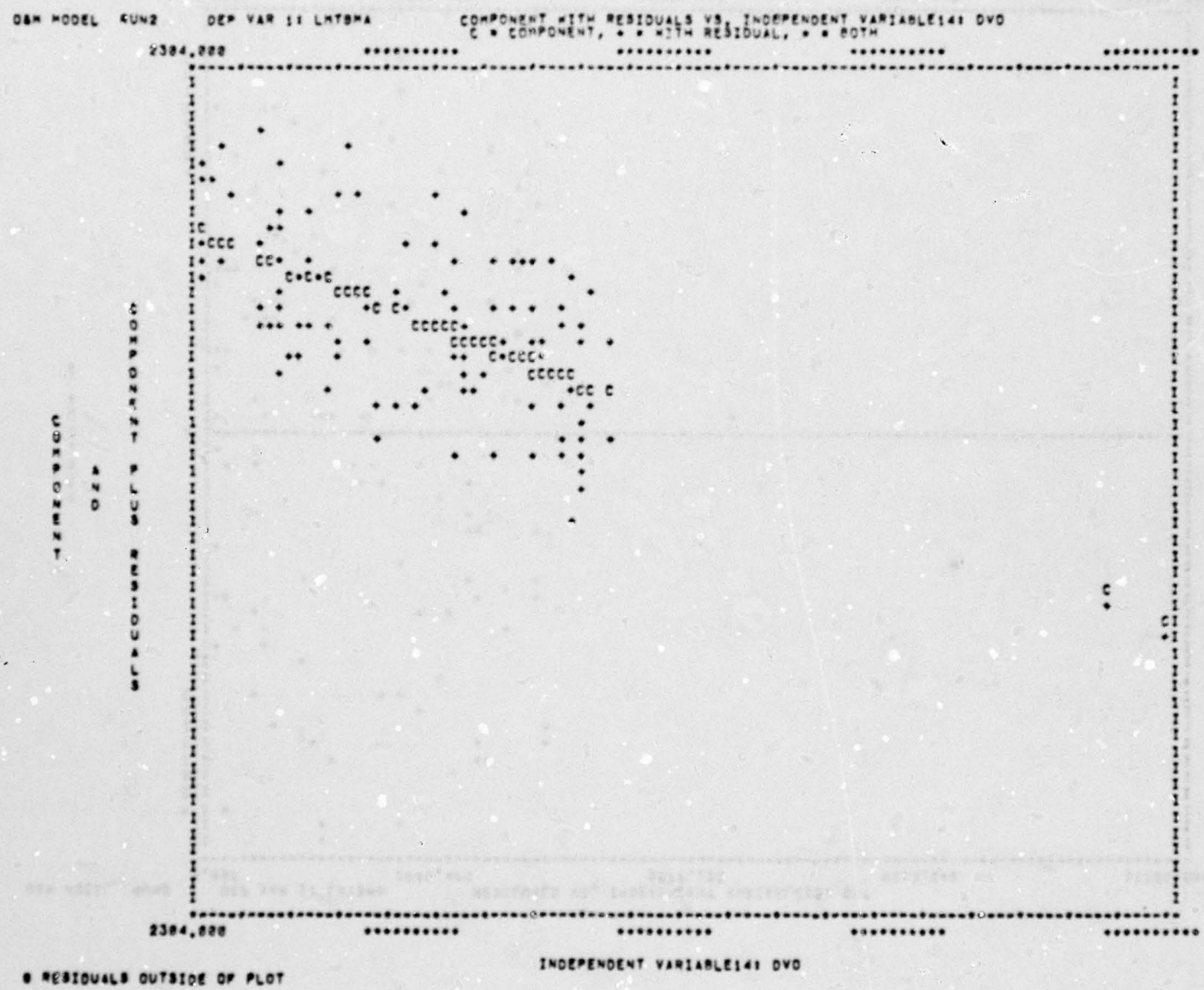
C = COMPONENT, + = WITH RESIDUAL, * = BOTH



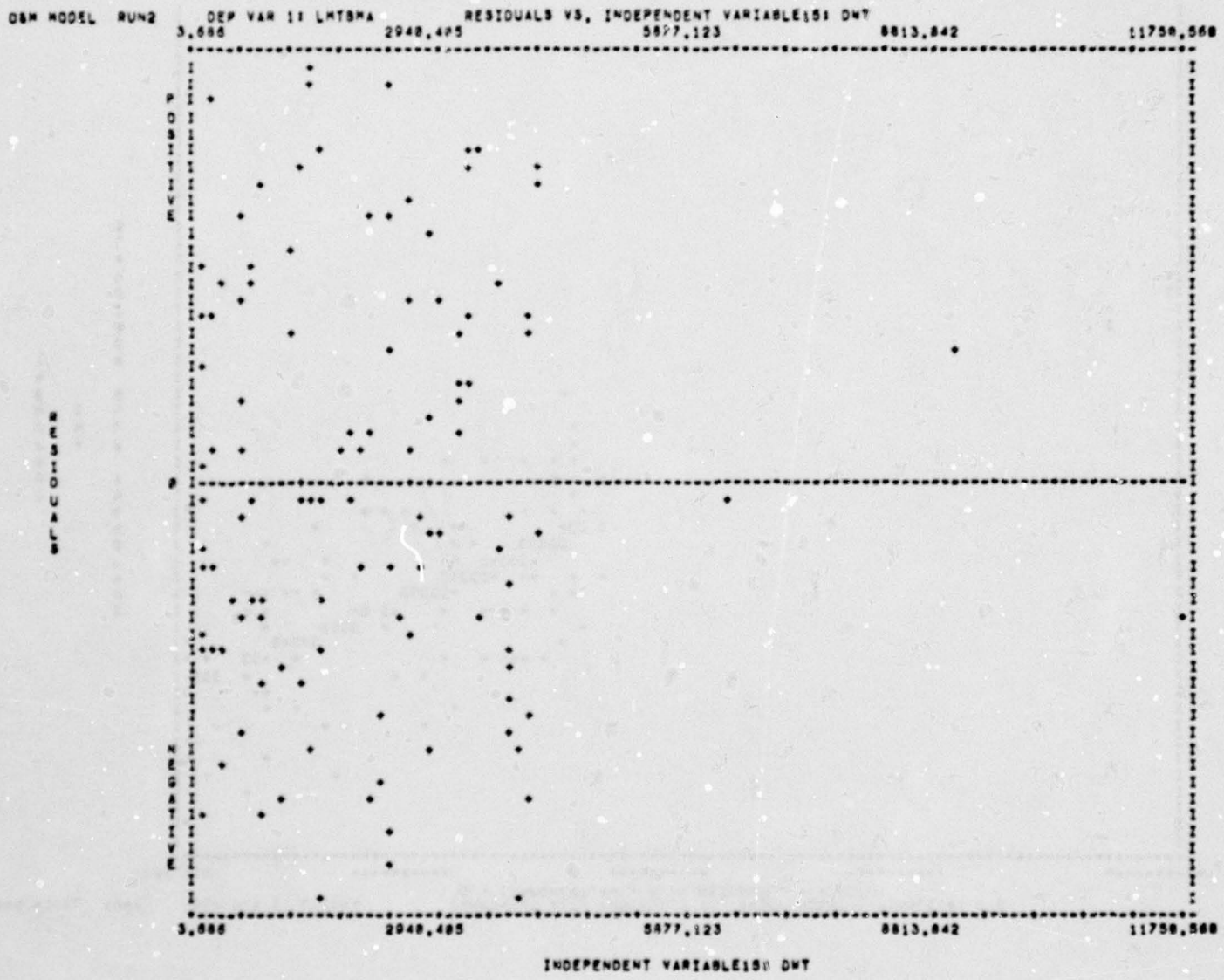
INDEPENDENT VARIABLE13: MUF

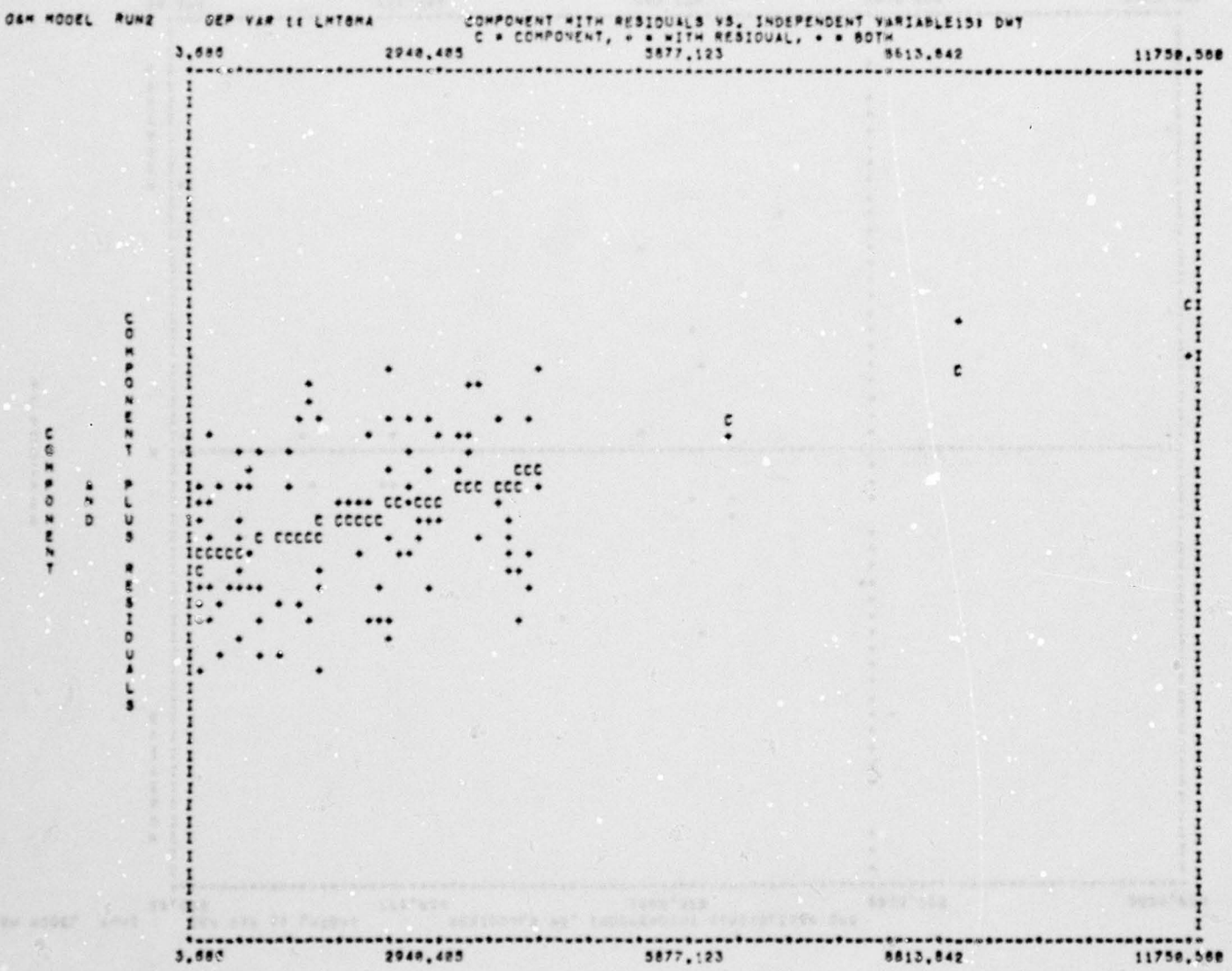
0 RESIDUALS OUTSIDE OF PLOT

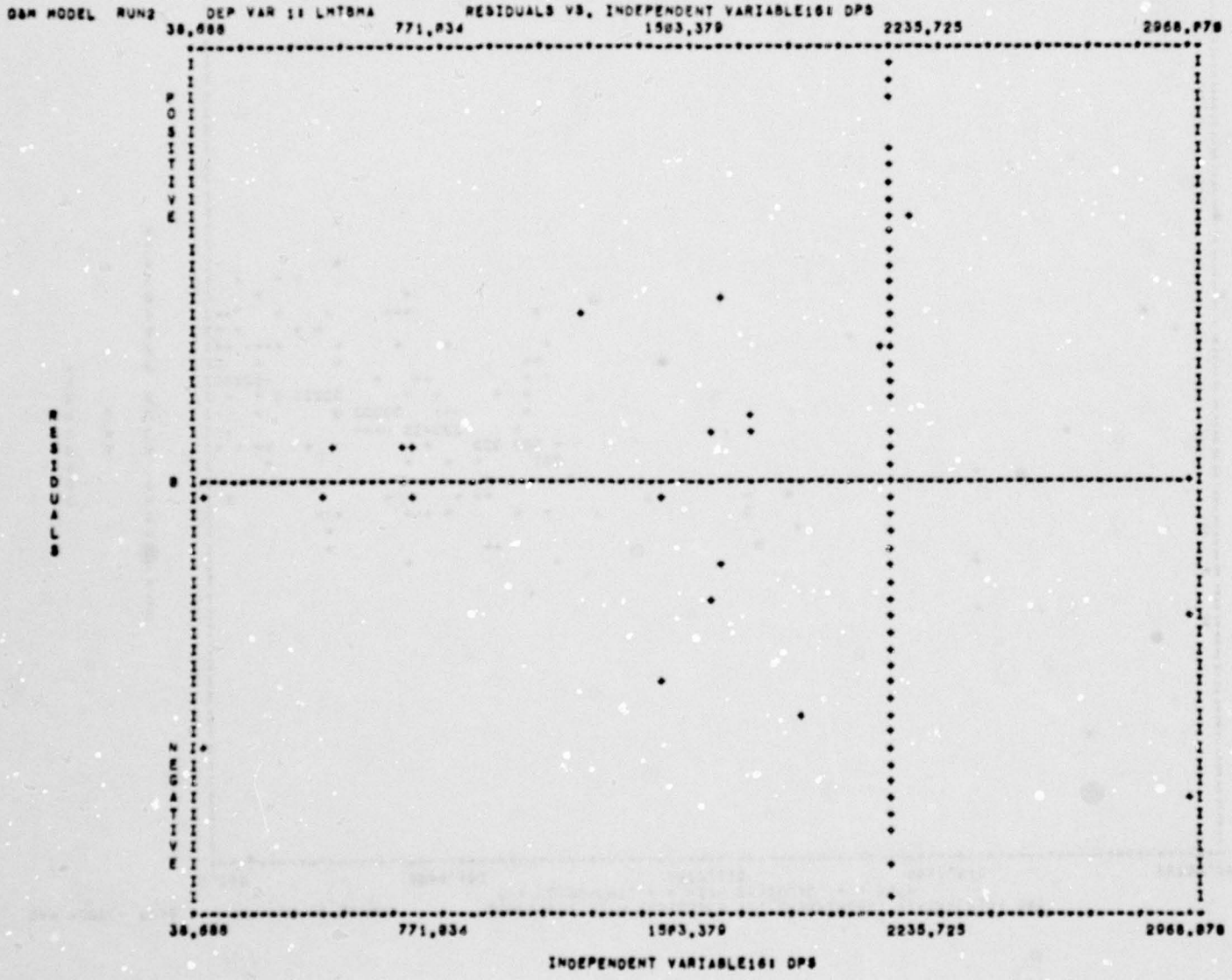

D&M MODEL RUN2 DEP VAR 11 LNTSMA RESIDUALS VS. INDEPENDENT VARIABLE141 DVO
2384.888
POSITIVE
RESIDUALS
0
NEGATIVE
2384.888
INDEPENDENT VARIABLE141 DVO

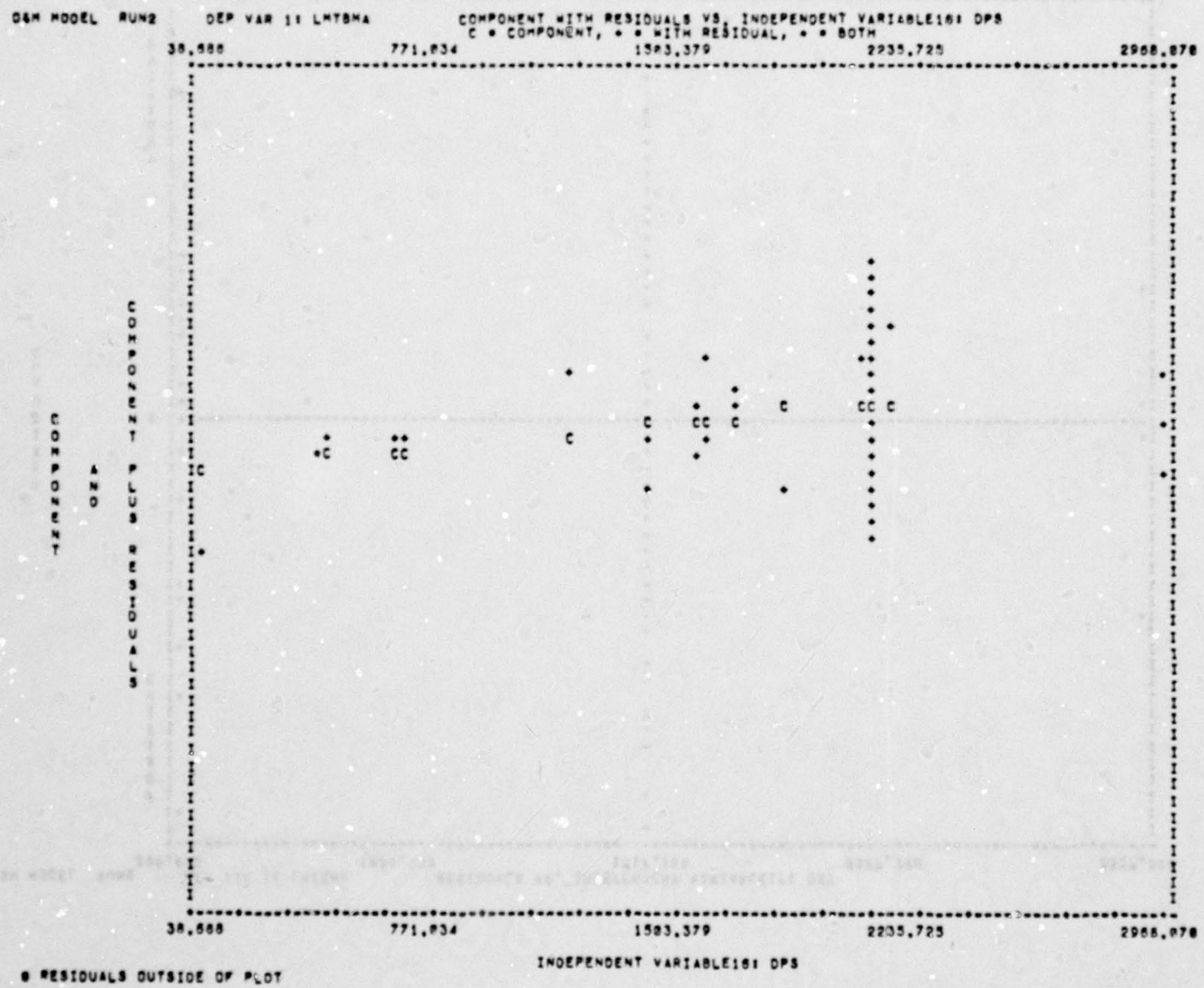


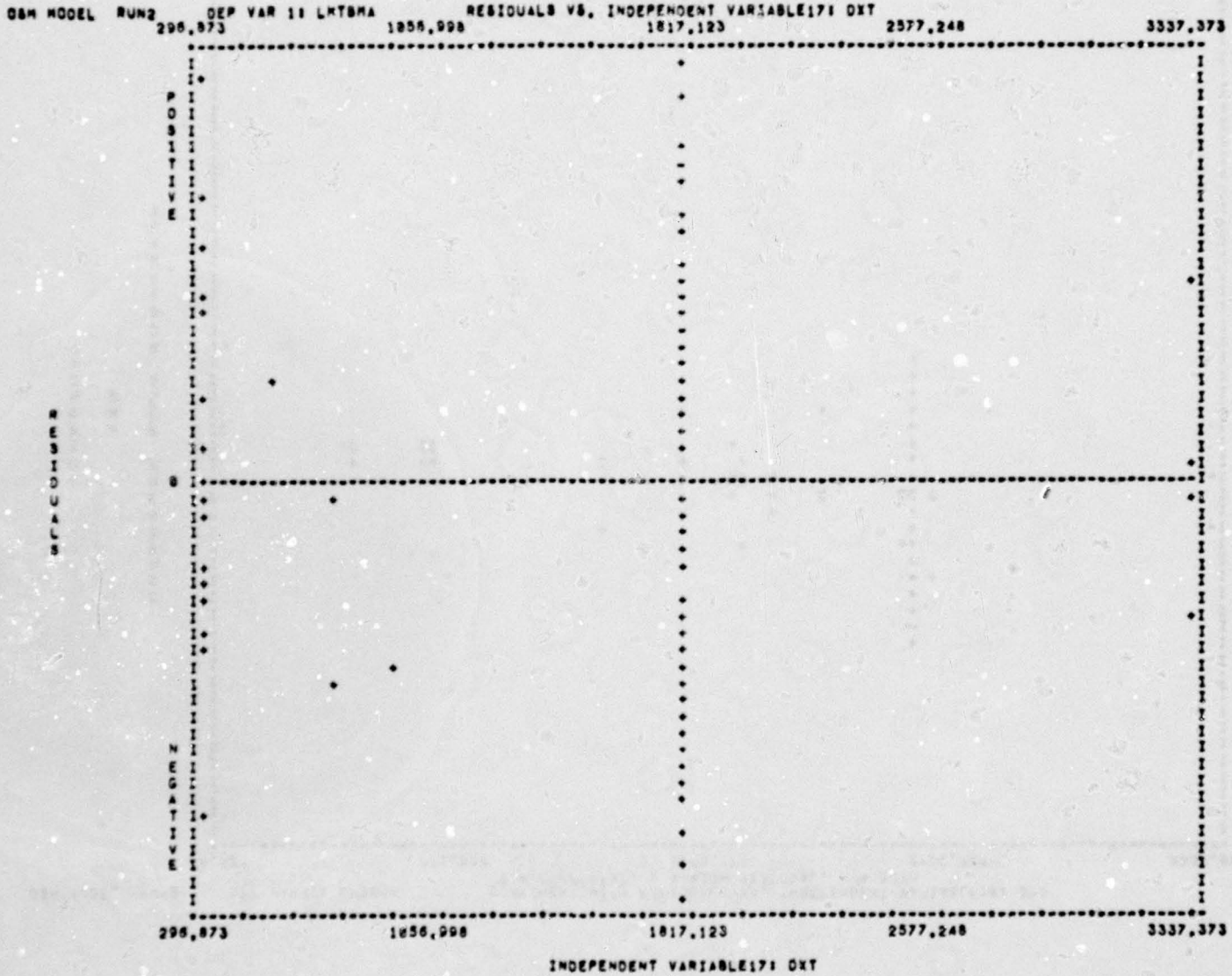
0 RESIDUALS OUTSIDE OF PLOT


O&M MODEL RUN2 DEP VAR IS LMTBMA RESIDUALS VS. INDEPENDENT VARIABLE(S): DWT
3,686
2948,495
5877,123
8813,842
11750,560
POSITIVE
RESIDUALS
0
NEGATIVE
INDEPENDENT VARIABLE(S): DWT

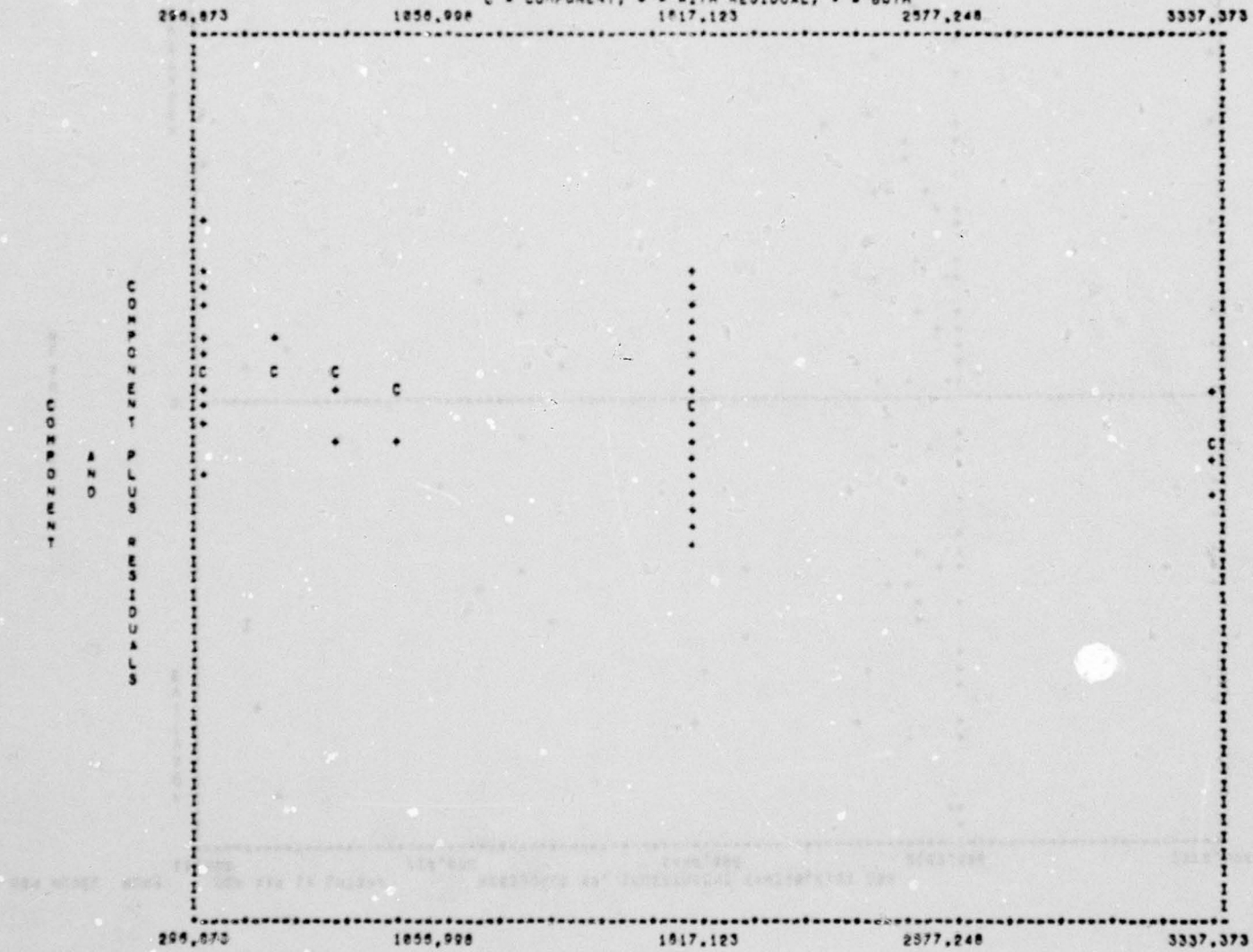

O&M MODEL RUN2 DEP VAR IS LMT8MA COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE(S): DWT
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
3,686
2948,485
5877,123
8813,842
11750,560
COMPONENT PLUS RESIDUALS
COMPONENT
PRD
INDEPENDENT VARIABLE(S): DWT
RESIDUALS OUTSIDE OF PLOT


D&M MODEL RUN2 DEP VAR 1: LMTBMA RESIDUALS VS. INDEPENDENT VARIABLE16: DPS
38,688
771,834
1503,379
2235,725
2968,970
POSITIVE
RESIDUALS
0
NEGATIVE
INDEPENDENT VARIABLE16: DPS

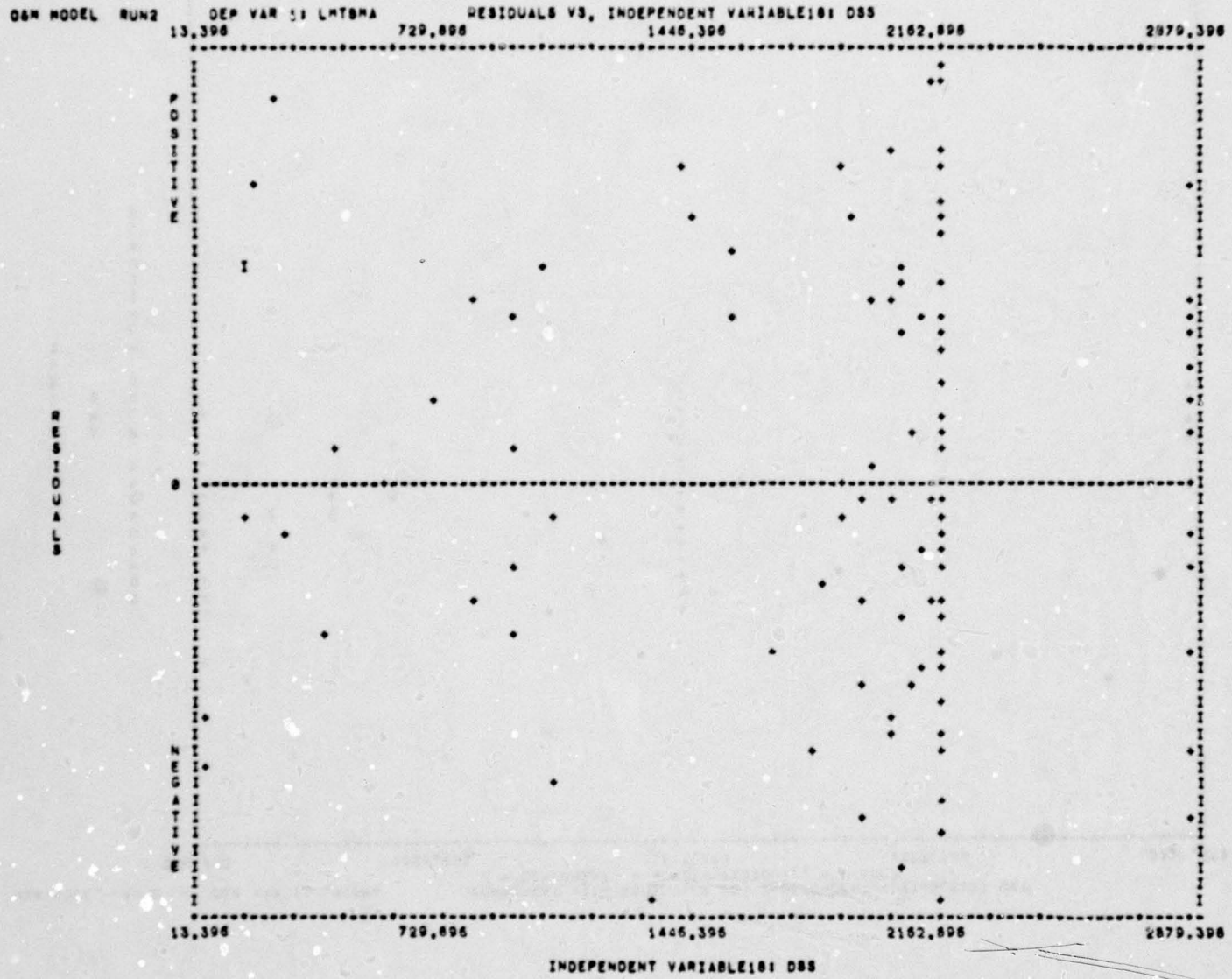

D&M MODEL RUN2 DEP VAR 1: LMTBMA COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE16: DPS
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
38,666
771,834
1583,379
2235,725
2968,878
COMPONENT PLUS RESIDUALS
COMPONENT AND
INDEPENDENT VARIABLE16: DPS
0 RESIDUALS OUTSIDE OF PLOT

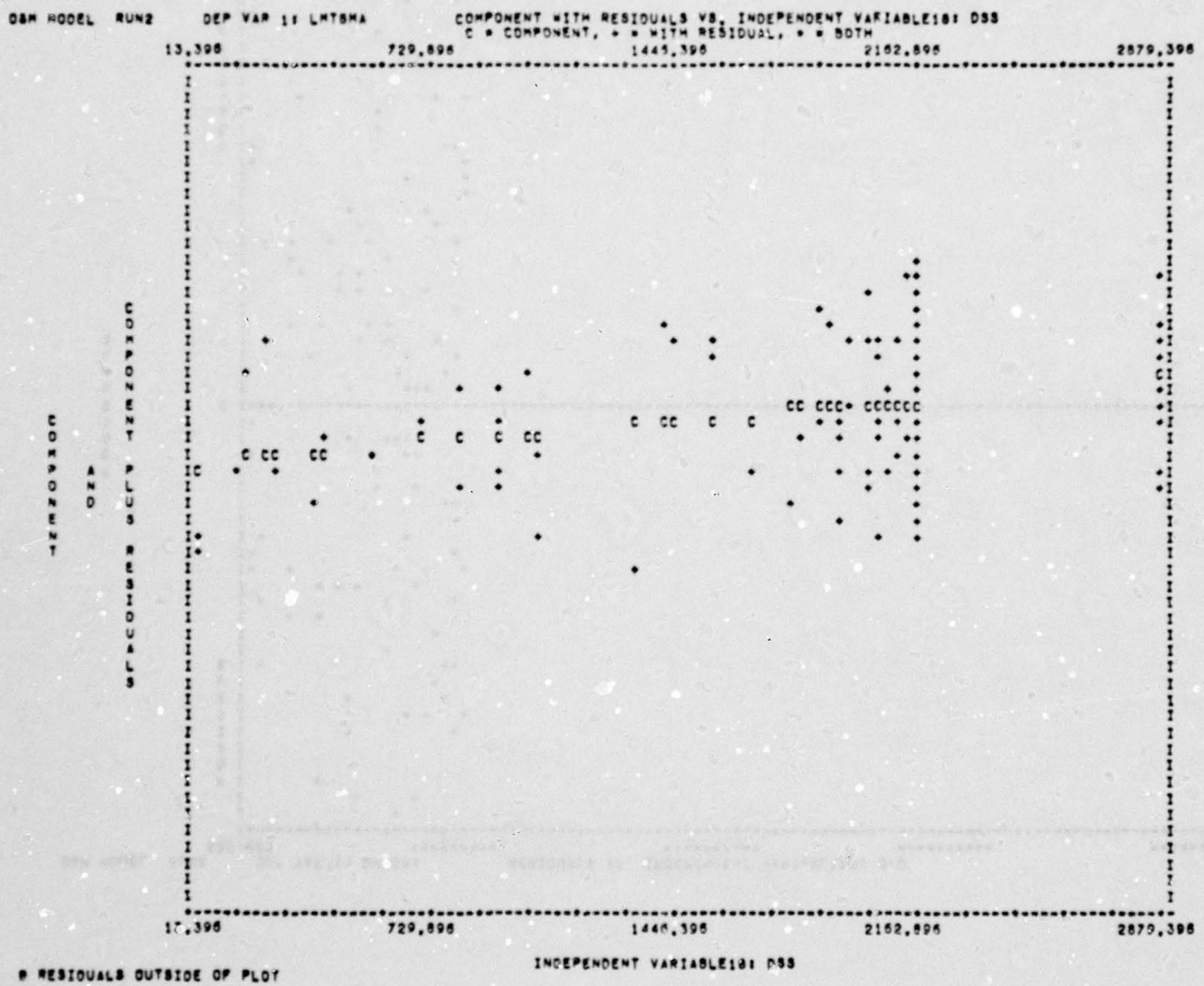

G&M MODEL RUN2 DEP VAR IS LNTSMA RESIDUALS VS. INDEPENDENT VARIABLE171 DXT
296,873
1856,998
1817,123
2577,248
3337,373
POSITIVE
RESIDUALS
0
NEGATIVE
296,873
1856,998
1817,123
2577,248
3337,373
INDEPENDENT VARIABLE171 DXT

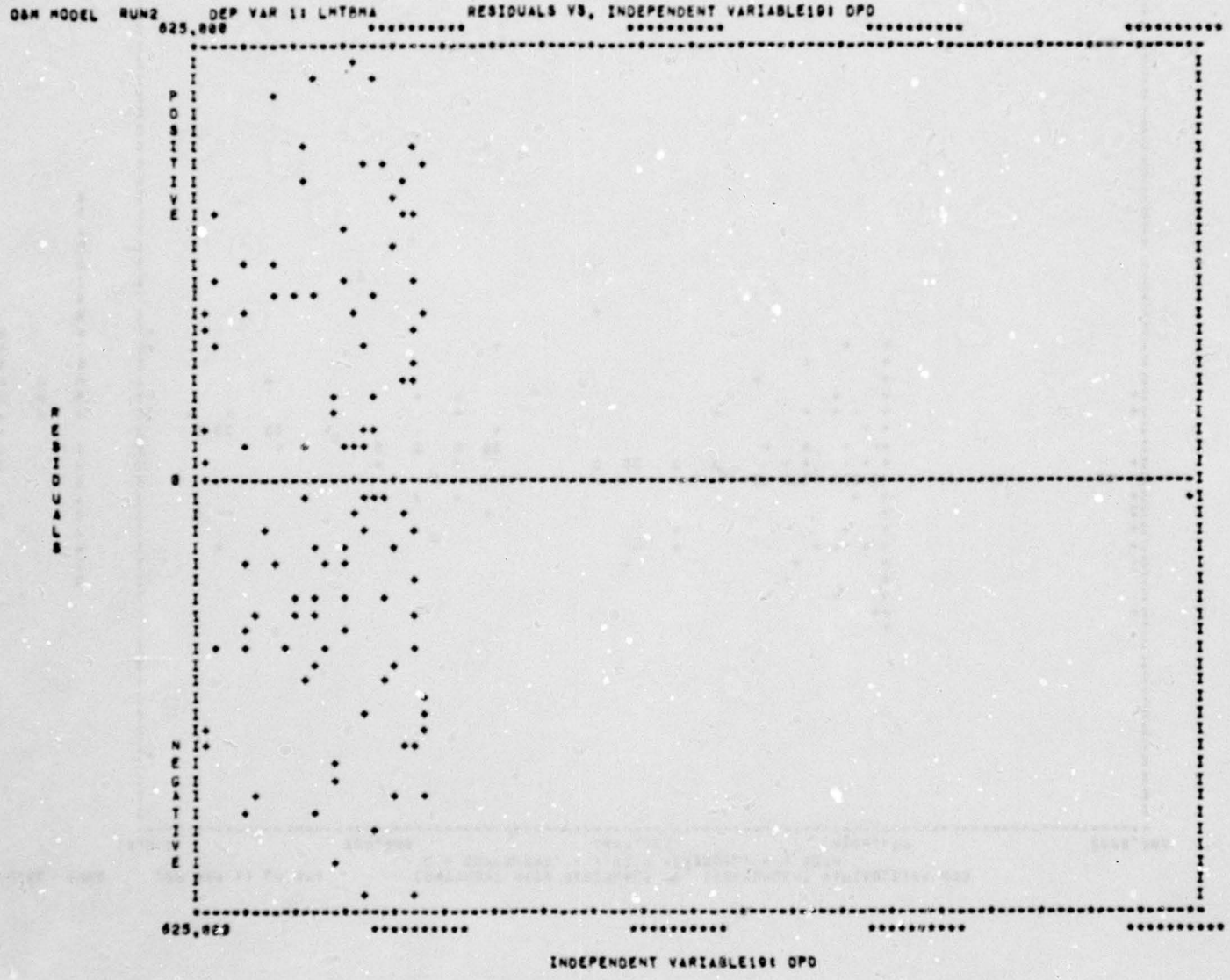
D&H MODEL RUN2 DEP VAR 1: LAfbMA COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE17: DXT
C = COMPONENT, + = WITH RESIDUAL, * = BOTH

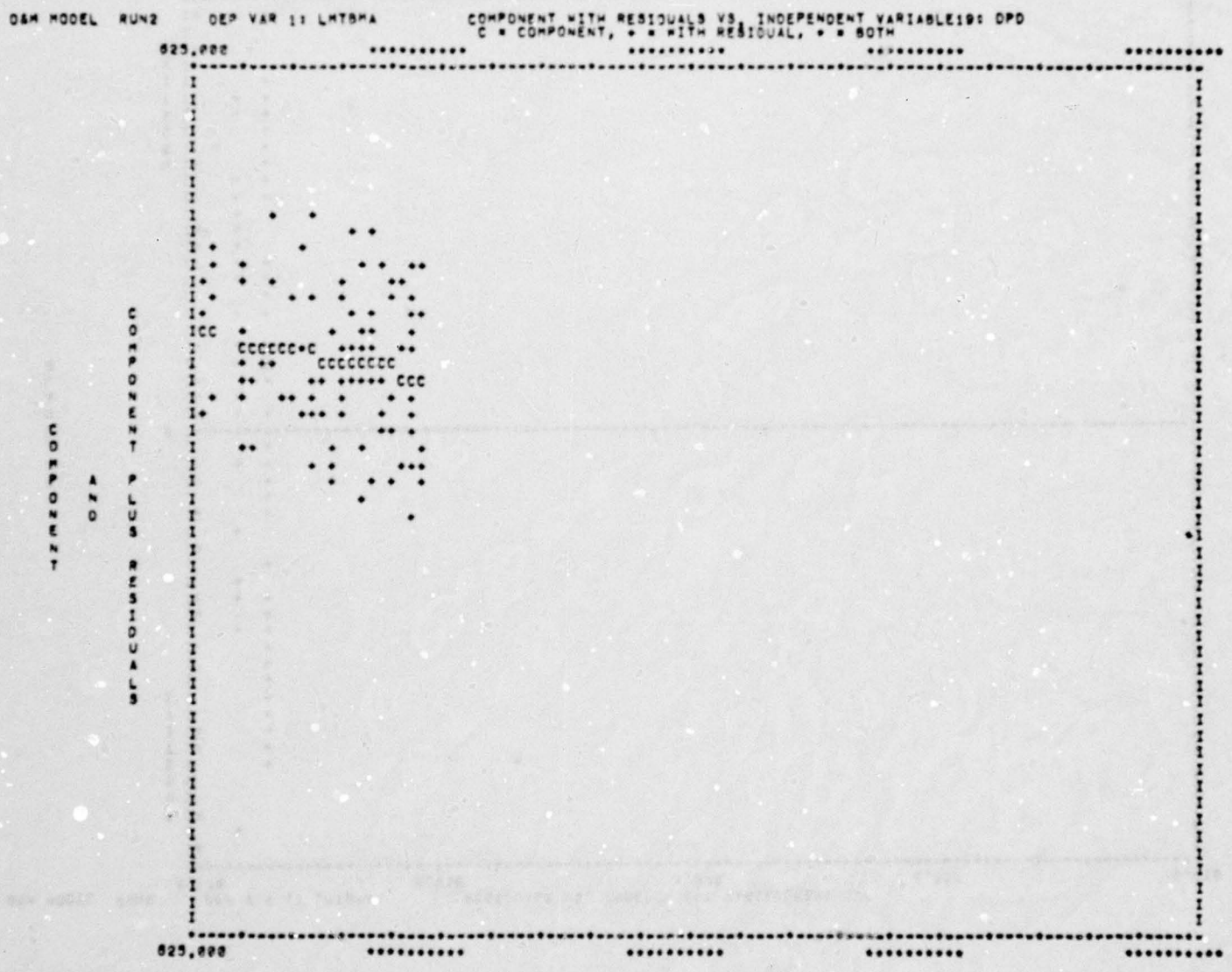


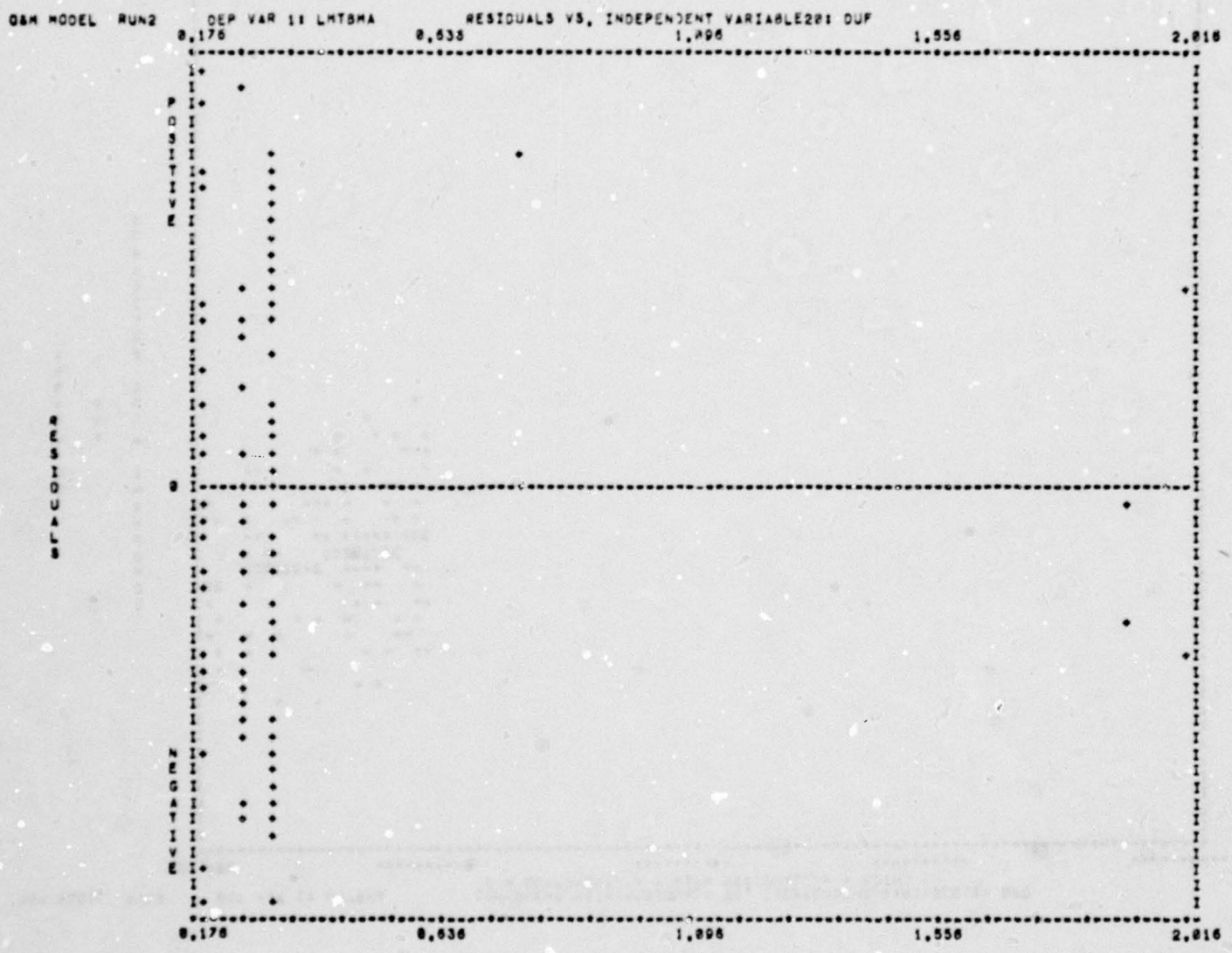
0 RESIDUALS OUTSIDE OF PLOT

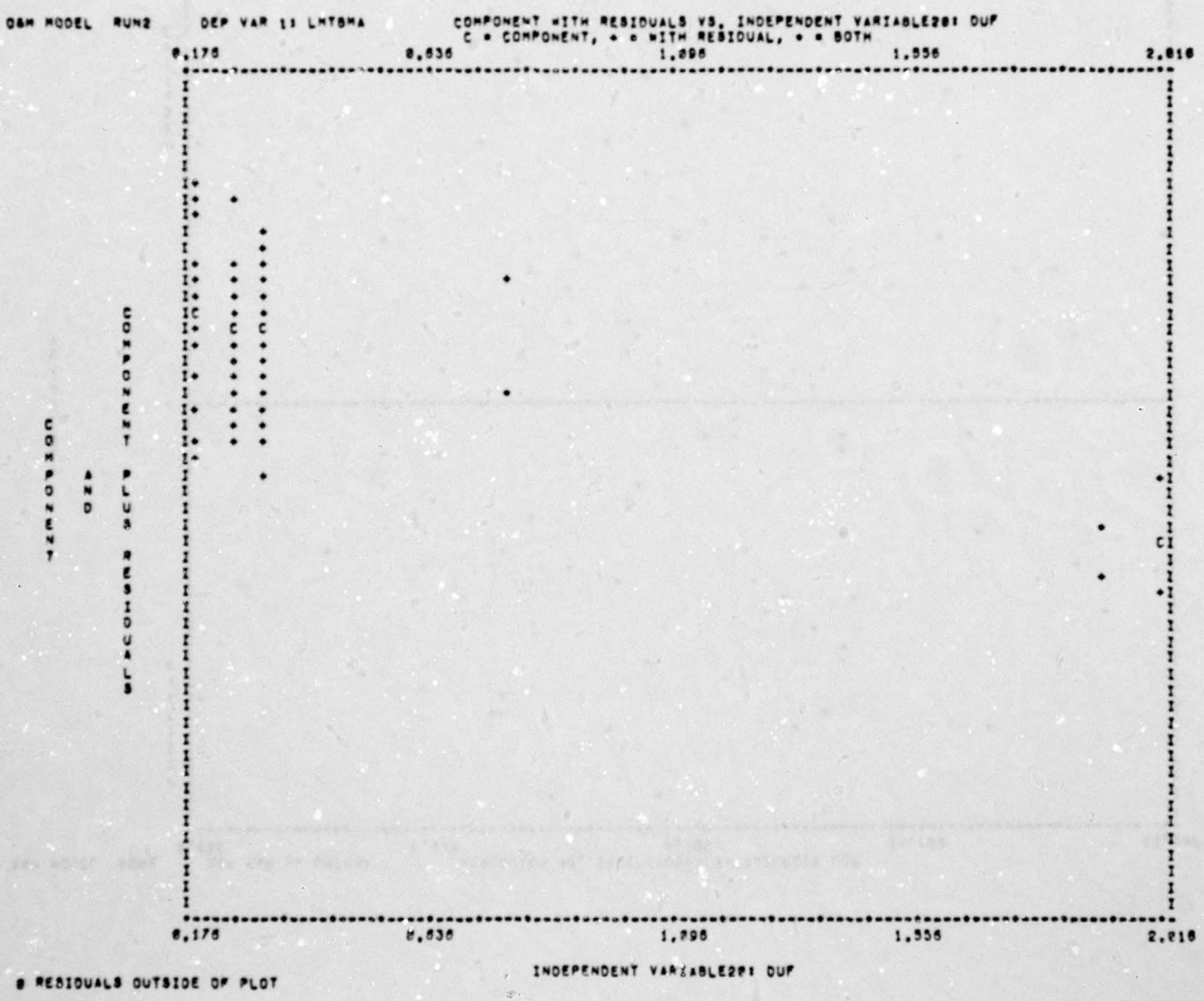

O&M MODEL RUN2
DEP VAR IS LMTBMA
RESIDUALS VS. INDEPENDENT VARIABLE[8]: DBS
13,396
729,896
1446,396
2162,896
2879,396
POSITIVE
0
NEGATIVE
SPACING
INDEPENDENT VARIABLE[8]: DBS

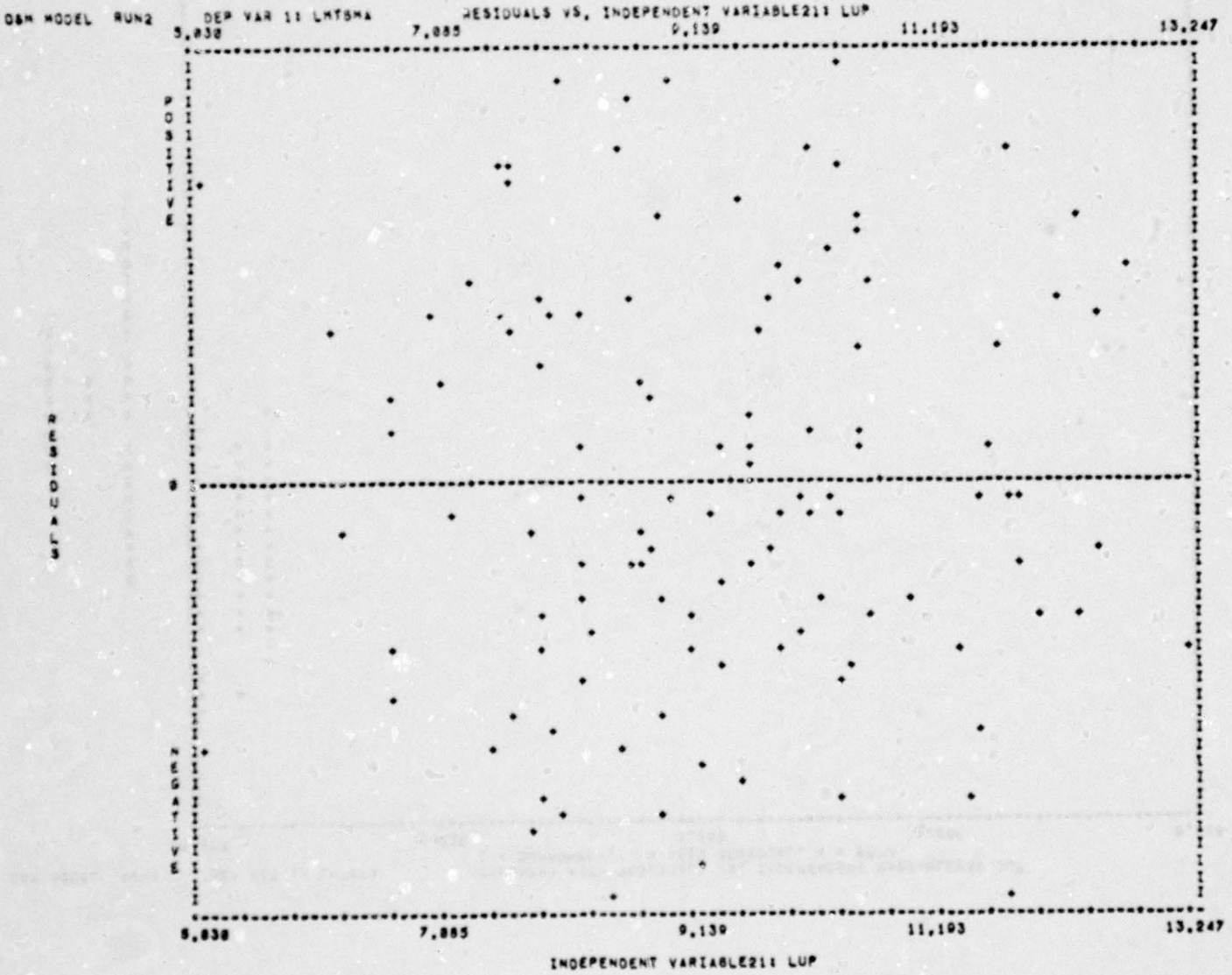

OSM MODEL RUN2 DEP VAR 1: LMTSMA
COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE18: DSS
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
13,396
729,896
1446,396
2162,896
2879,396
COMPONENT AND COMPONENT PLUS RESIDUALS
INDEPENDENT VARIABLE18: DSS
* RESIDUALS OUTSIDE OF PLOT

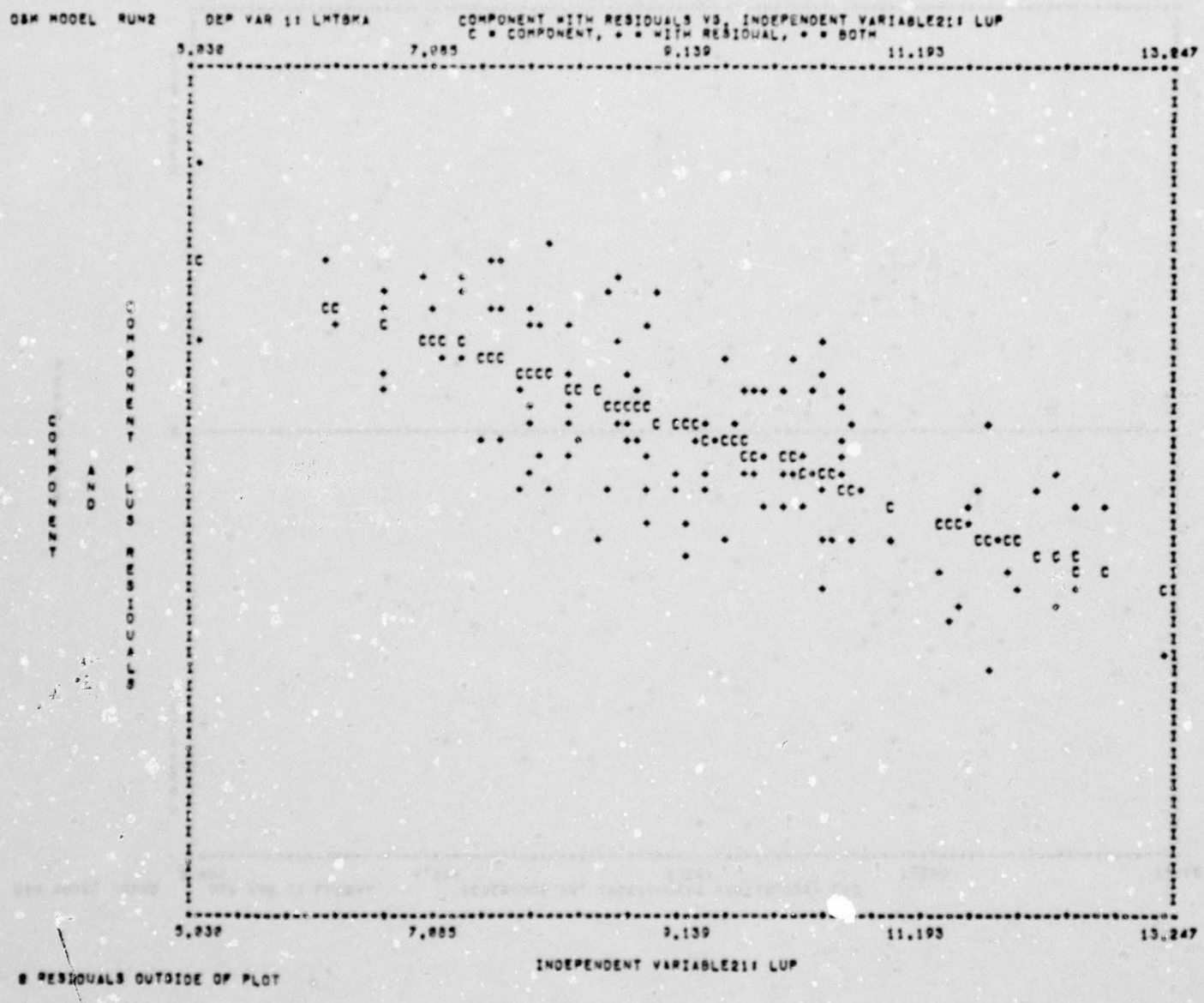

O&M MODEL RUN2 DEP VAR 1: LMTBMA RESIDUALS VS, INDEPENDENT VARIABLE191 OPD
625,888
POSITIVE
RESIDUALS
0
NEGATIVE
625,823
INDEPENDENT VARIABLE191 OPD

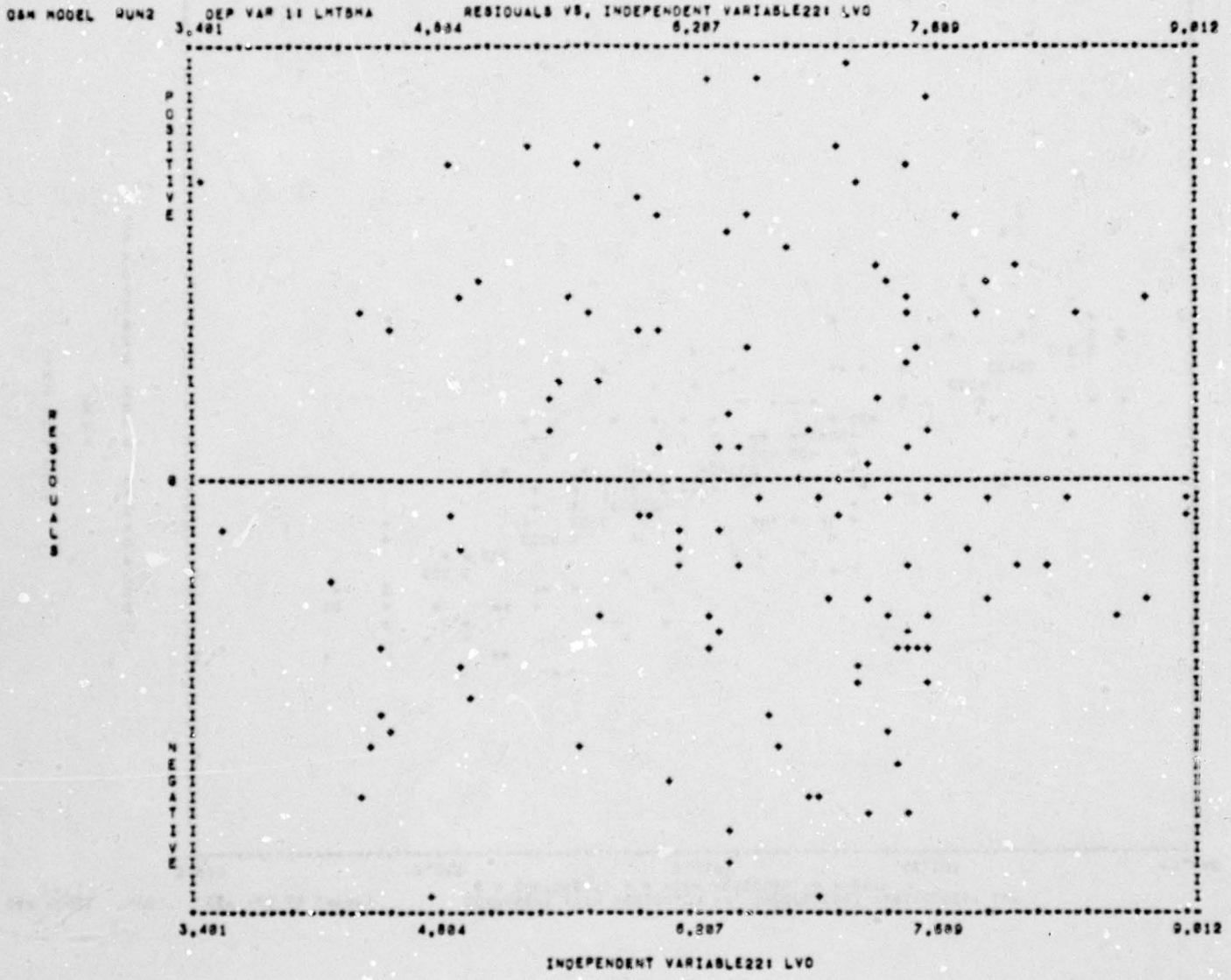

O&M MODEL RUN2 DEP VAR 1: LMTBMA COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE19: DPD
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
625,000
625,000
COMPONENT PLUS RESIDUALS AND COMPONENT
INDEPENDENT VARIABLE19: DPD
0 RESIDUALS OUTSIDE OF PLOT

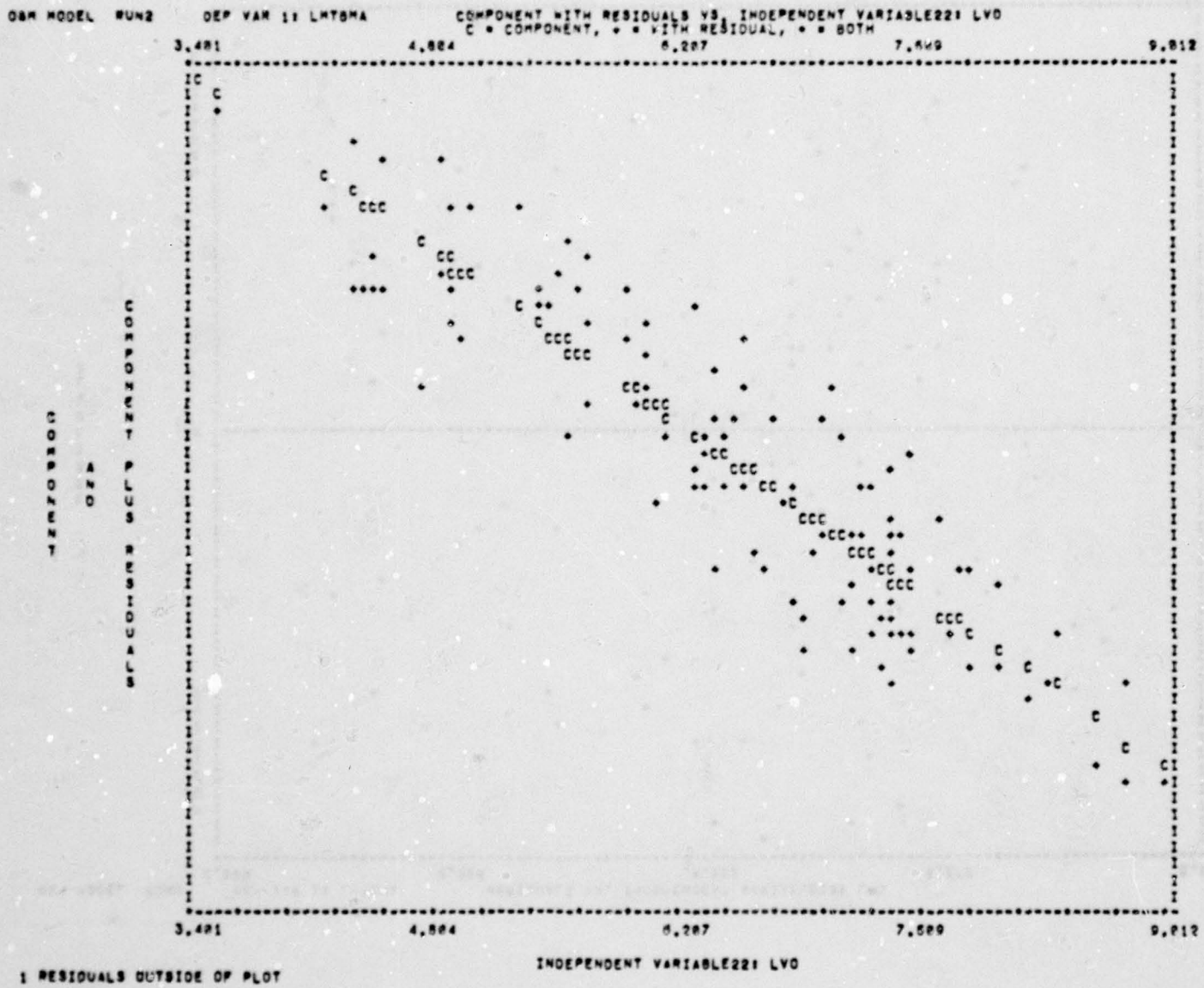

O&M MODEL RUN2 DEP VAR 1: LMTBMA RESIDUALS VS. INDEPENDENT VARIABLE22: DUF
0.176
0.636
1.096
1.556
2.016
POSITIVE
0
NEGATIVE
RESIDUALS
INDEPENDENT VARIABLE20: DUF


O&M MODEL RUN2 DEP VAR 11 LNTSMA COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE281 DUF
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
0.176
0.636
1.096
1.556
2.016
COMPONENT PLUS RESIDUALS
AND
COMPONENT
INDEPENDENT VARIABLE281 DUF
0 RESIDUALS OUTSIDE OF PLOT

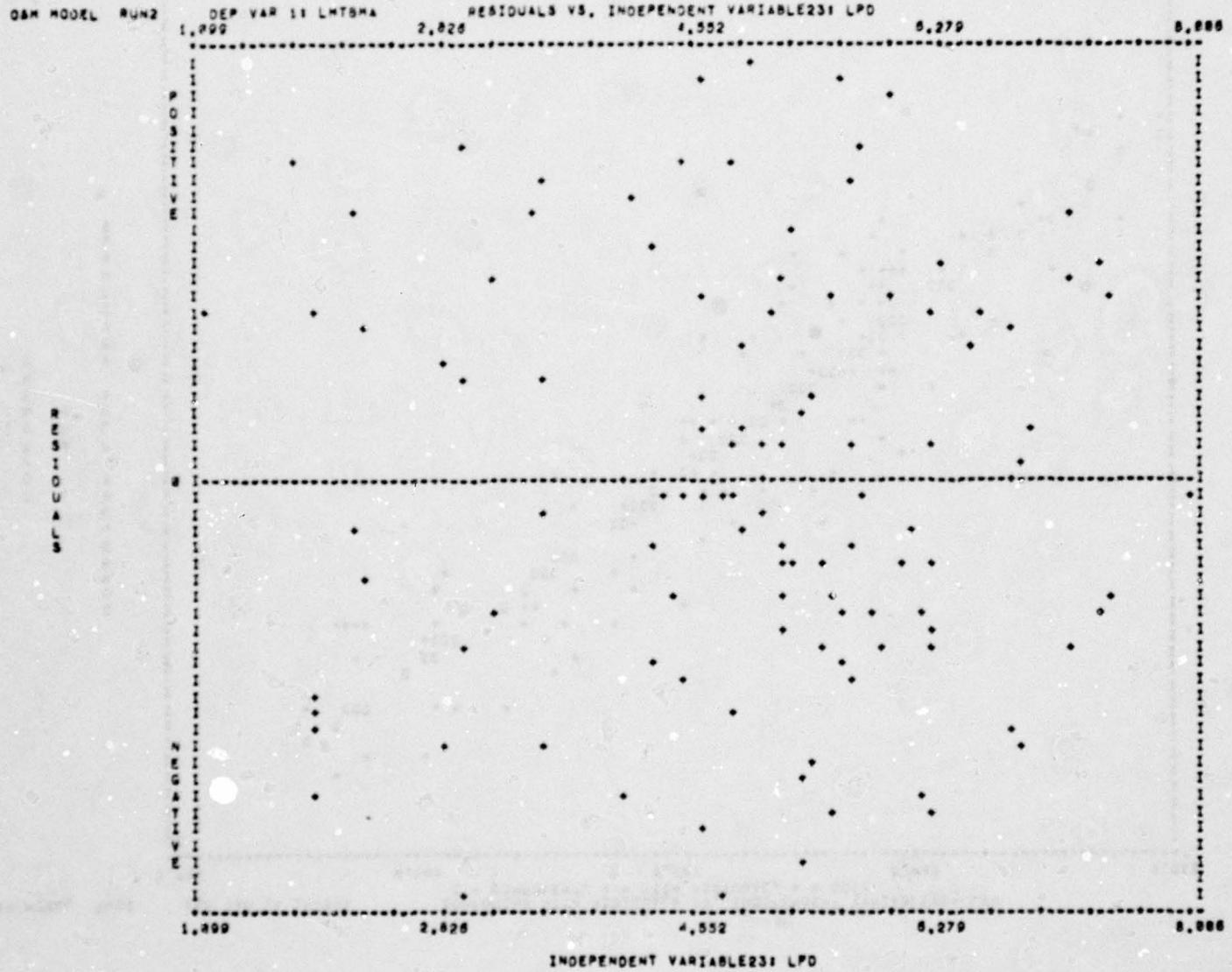

O&M MODEL RUN2 DEP VAR 11 LMTSMA RESIDUALS VS. INDEPENDENT VARIABLE211 LUP
5,838
7,885
9,139
11,193
13,247
POSITIVE
0
NEGATIVE
SPACOMER
INDEPENDENT VARIABLE211 LUP

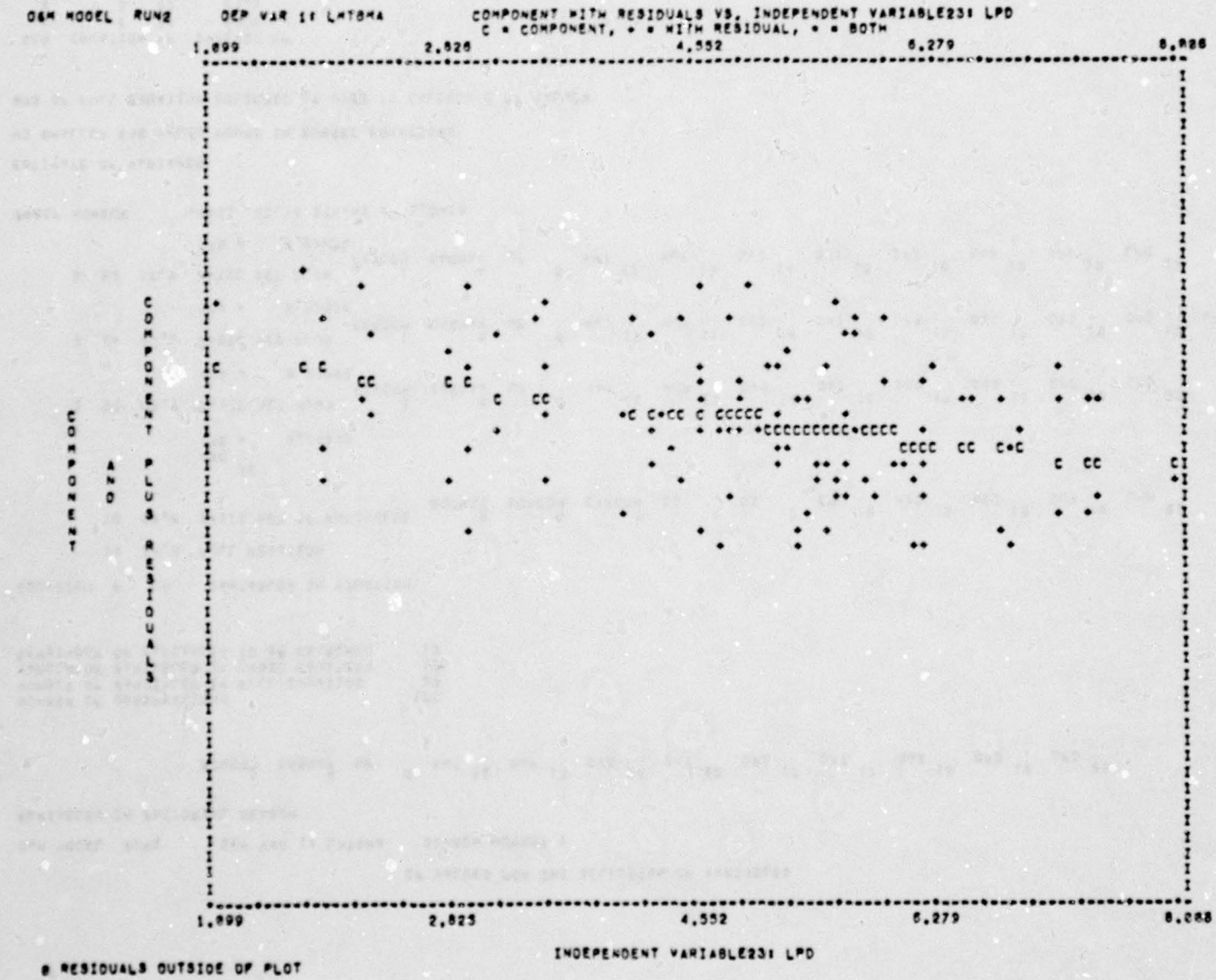

OSM MODEL RUN2 DEP VAR 1: LMTSMA
COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE21: LUP
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
5.838
7.885
9.139
11.193
13.247
CONDOMINIUM
AND
SPACIOUS RESIDENTIAL
8 RESIDUALS OUTSIDE OF PLOT
INDEPENDENT VARIABLE21: LUP


G&M MODEL RUN2
DEP VAR 11 LMTBMA
RESIDUALS VS, INDEPENDENT VARIABLE221 LVO
3,481
4,884
6,287
7,689
9,812
POSITIVE
0
NEGATIVE
RESIDUALS
INDEPENDENT VARIABLE221 LVO



1 RESIDUALS OUTSIDE OF PLOT


O&M MODEL RUN2
DEP VAR 11 LMTSMA
RESIDUALS VS. INDEPENDENT VARIABLE23: LPD
1,999
2,826
4,552
6,279
8,006
POSITIVE
R
NEGATIVE
RESIDUALS
INDEPENDENT VARIABLE23: LPD


O&M MODEL RUN2 DEP VAR IS LMTBMA COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE23: LPD
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
1.899
2.826
4.552
6.279
8.006
COMPONENT PLUS RESIDUALS
AND
COMPONENT
INDEPENDENT VARIABLE23: LPD
0 RESIDUALS OUTSIDE OF PLOT

CP VALUES FOR THE SELECTION OF VARIABLES

O&M MODEL RUN2 DEP VAR 11 LMTSMA SEARCH NUMBER 1

VARIABLES IN FACTORIAL SEARCH

1 FIGCOM 4 CARNAV 6 UP 11 MWT 13 MUP 14 DVO 15 DWT 16 DPS 17 DXT 18 DSS 19 DPD 23 LPD

NUMBER OF OBSERVATIONS 128
NUMBER OF VARIABLES IN FULL EQUATION 23
NUMBER OF VARIABLES IN BASIC EQUATION 11
REMAINDER OF VARIABLES TO BE SEARCHED 12

EQUATION	P	CP	VARIABLES IN EQUATION
	24	24,0	FULL EQUATION
	12	68,8	BASIC SET OF VARIABLES 2 BOMNAV 3 BOMCOM 5 CARCOM 7 CD 8 DI 9 EM 10 MVO 12 MSB 20 DUP 21 LUP 22 LVO
			RMS = 0,34322
1	23	25,1	BASIC SET PLUS 1 FIGCOM 4 CARNAV 6 UP 11 MWT 13 MUP 14 DVO 15 DWT 17 DXT 18 DSS 19 DPD 23 LPD
			RMS = 0,23982
2	24	24,0	BASIC SET PLUS 1 FIGCOM 4 CARNAV 6 UP 11 MWT 13 MUP 14 DVO 15 DWT 16 DPS 17 DXT 18 DSS 19 DPD 23 LPD
			RMS = 0,22596
3	23	25,1	BASIC SET PLUS 1 FIGCOM 4 CARNAV 6 UP 11 MWT 13 MUP 14 DVO 15 DWT 16 DPS 18 DSS 19 DPD 23 LPD
			RMS = 0,23879

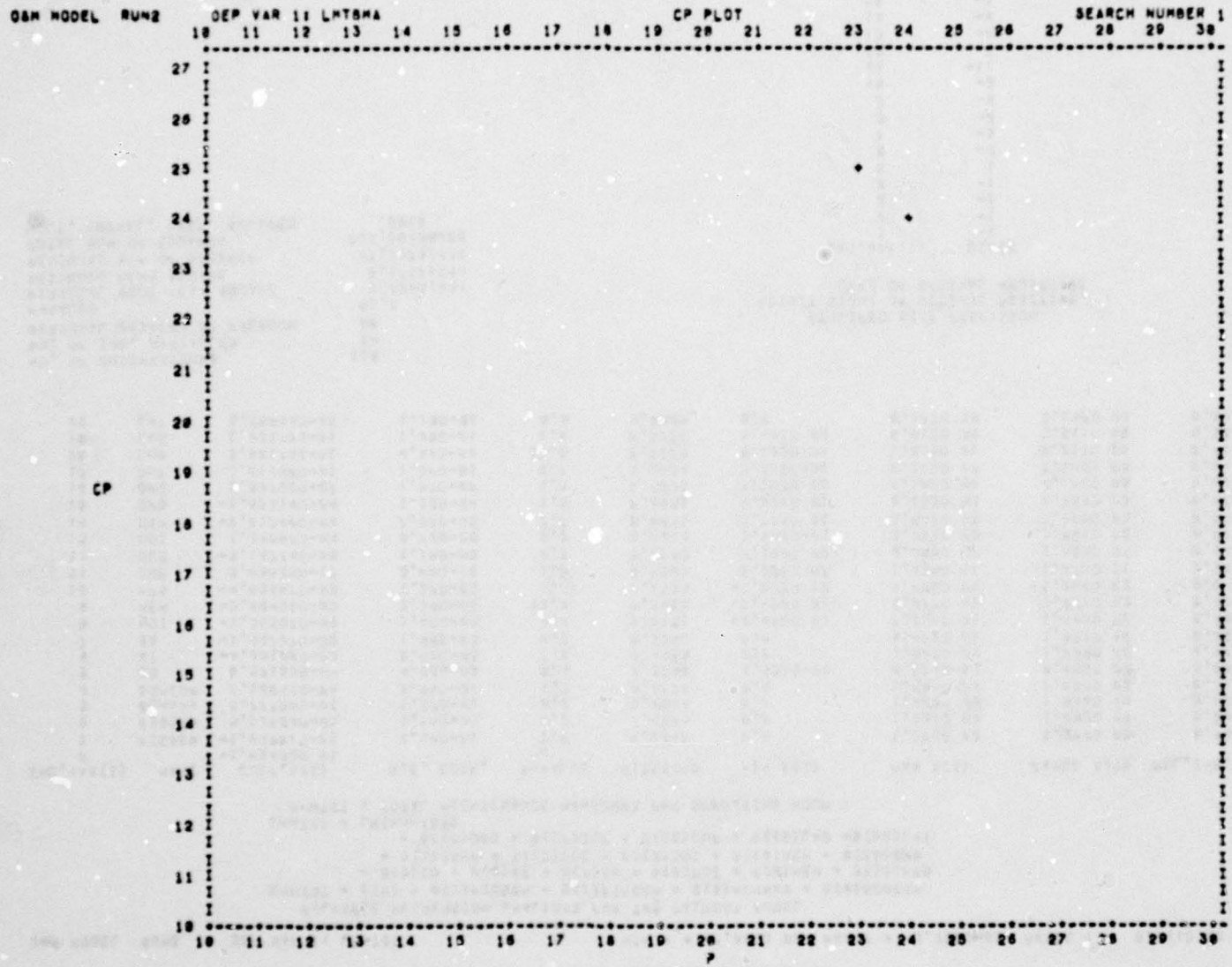
SWEEP NUMBER 4895, DELTA Z(K,K) = 1,0-14

ESTIMATE OF VARIANCE

NO SMALLER RMS VALUE FOUND IN SUBSET EQUATIONS

RMS OF FULL EQUATION SELECTED BY USER TO CALCULATE CP VALUES

SEQ	EQUATION	P	ORDERED CP
1	2	24	24,0
2	3	23	25,1
3	1	23	25,1


O&M MODEL RUN2
DEP VAR 11 LNTSMA
CP PLOT
SEARCH NUMBER 1
CP
P
10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN3 DEP VAR 11 LMMTOT MIN Y = -7,998D PP MAX Y = -5,4590-01 RANGE Y = 6,544D 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPOS" MODEL

LMMTOT = B(0) + B(1)FIGSEN + B(2)FIGCOM + B(3)BOMNAV + B(4)BOMCOM
+ B(5)CO + B(6)XT + B(7)SS + B(8)MOI + B(9)MEM + B(10)MPS
+ B(11)OUP + B(12)OCC + B(13)OOI + B(14)OEM + B(15)OPS
+ B(16)OPO + B(17)OUF + B(18)LUP + B(19)LVO +B(20)LWT

LMMTOT = LN(MMMTOT)

MMMTOT = TOTAL MAINTENANCE MANHOURS PER OPERATING HOUR

IND,VAR(I)	NAME	COEF,B(I)	S.E. COEF.	T-VALUE	R(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL.INF.X(I)
0		-1,414420 P1							
1	FIGSEN	-1,992810-01	1,140-01	1,8	0,3448	0,0	1,0000 00	1,0000 00	0,03
2	FIGCOM	5,948240-01	1,850-01	3,2	0,0893	0,0	1,0000 00	1,0000 00	0,09
3	BOMNAV	5,777540-01	1,370-01	4,2	0,2384	0,0	1,0000 00	1,0000 00	0,09
4	BOMCOM	7,132410-01	1,590-01	4,5	0,1428	0,0	1,0000 00	1,0000 00	0,11
5	CO	2,571580-01	4,880-02	6,4	0,3749	4,0230-03	6,6740 00	6,6690 00	0,26
6	XT	-4,491000-03	2,760-03	1,6	0,4956	0,0	1,0000 02	1,0000 02	0,07
7	SS	-1,837070-02	1,980-03	8,3	0,6992	0,0	1,0000 02	1,0000 02	0,25
8	MOI	-1,315670-02	1,460-03	9,0	0,5161	-2,4990 01	7,5180 01	1,0000 02	0,28
9	MEM	-2,484210-02	2,390-03	10,4	0,6865	-1,0200 01	8,9800 01	1,0000 02	0,36
10	MPS	-4,038870-03	2,270-03	1,8	0,1333	-5,0100 00	9,4990 01	1,0000 02	0,06
11	OUP	5,865320-12	3,020-12	1,9	0,2592	2,2260 07	1,4360 11	1,4360 11	0,13
12	OCC	-3,157740-08	1,180-08	2,7	0,2798	7,2970 02	2,8560 07	2,8560 07	0,14
13	OOI	1,499970-04	6,720-05	2,2	0,2414	1,5000-01	3,0910 03	3,0910 03	0,07
14	OEM	-2,912490-04	7,570-05	2,7	0,2831	2,7040 01	3,8470 03	3,0200 03	0,09
15	OPS	-1,623140-04	1,120-04	1,5	0,2651	9,4280 01	2,8830 03	2,7880 03	0,07
16	OPO	1,897620-07	1,970-07	1,8	0,2893	7,2990 02	4,1990 05	4,1980 05	0,12
17	OUF	3,614280-01	1,360-01	2,7	0,1634	2,0250-01	2,1830 00	1,9980 00	0,10
18	LUP	5,981730-01	4,440-02	13,5	0,7278	5,8340 00	1,3250 01	8,2170 00	0,75
19	LVO	1,883780-01	1,050-01	1,8	0,9028	3,4810 00	9,8120 00	5,6110 00	0,16
20	LWT	3,789540-01	1,160-01	3,3	0,9868	0,0	5,1570 00	5,1570 00	0,30

NO. OF OBSERVATIONS	119
NO. OF IND. VARIABLES	20
RESIDUAL DEGREES OF FREEDOM	98
F-VALUE	81,9
RESIDUAL ROOT MEAN SQUARE	0,42061484
RESIDUAL MEAN SQUARE	0,17691684
RESIDUAL SUM OF SQUARES	17,33785988
TOTAL SUM OF SQUARES	236,18738458
MULT. CORREL. COEF. SQUARED	,9268

REQUIRED X(I) PRECISION
(DIGIT RIGHT OF DECIMAL POSITIVE,
LEFT OF DECIMAL NEGATIVE)

IND,VAR(I)	DIGIT
1	-1
2	-1
3	-1
4	-1
5	1
6	-2
7	-2
8	-2
9	-2
10	-2
11	-11
12	-7
13	-4
14	-4
15	-3
16	-6
17	1
18	1
19	1
20	1

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

Q&M MODEL RUN3 DEP VAR 11 LMNTOT RESIDUAL ROOT MEAN SQUARE OF FITTED EQUATION: 0.42

STANDARD DEVIATION ESTIMATED FROM RESIDUALS OF NEIGHBORING OBSERVATIONS (OBSERVATIONS 1 TO 4 APART IN FITTED Y ORDER).

NO.	CUMULATIVE STD DEV	ORDERED BY WSSD			DEL	RESIDUALS	ORDERED BY FITTED Y				
		WSSD	OBSV.	OBSV.			WSSD	DEL	RESIDUALS	FITTED Y	OBSV.	SEQ.
1	0.21	0.0	92	91		0.22	0.0		0.56	-6.66	88	1
2	0.31	0.0	65	64		0.43	52.95		2.23	-6.66	85	2
3	0.39	0.0	88	86		0.56	19.17		0.94	-6.29	117	3
4	0.41	0.01	121	119		0.45	22.66		0.52	-6.25	59	4
5	0.33	0.05	6	128		0.02	5.28		0.09	-6.01	98	5
6	0.39	0.06	109	108		0.16	0.85		0.02	-5.99	6	6
7	0.29	0.17	4	120		0.25	2.67		0.69	-5.86	128	7
8	0.26	0.25	53	58		0.02	11.14		0.19	-5.68	7	8
9	0.25	0.44	13	14		0.20	66.19		0.13	-5.48	70	9
10	0.23	0.48	85	4		0.01	55.38		0.16	-5.45	38	10
11	0.22	0.56	7	16		0.16	55.02		0.21	-5.31	16	11
12	0.25	0.64	16	35		0.53	63.16		0.63	-5.27	76	12
13	0.33	0.72	2	119		1.38	36.23		0.37	-5.26	116	13
14	0.38	0.78	75	74		1.83	36.38		0.79	-5.18	75	14
15	0.37	0.79	48	29		0.29	2.39		0.23	-5.13	35	15
16	0.43	0.89	121	2		0.99	21.89		0.98	-5.09	108	16
17	0.44	0.93	62	17		1.26	45.18		0.91	-4.95	112	17
18	0.45	0.95	19	54		0.69	29.87		0.57	-4.79	74	18
19	0.43	0.91	85	86		0.28	31.86		0.65	-4.71	79	19
20	0.44	0.91	64	66		0.54	51.29		0.67	-4.70	111	20
21	0.42	0.91	55	54		0.16	28.66		0.85	-4.59	56	21
22	0.43	0.93	114	58		0.61	7.11		1.01	-4.57	71	22
23	0.41	1.04	79	71		0.86	5.32		1.58	-4.39	11	23
24	0.41	1.10	54	114		0.37	8.85		0.77	-4.28	28	24
25	0.42	1.10	117	128		0.52	2.99		0.38	-4.23	39	25
26	0.40	1.15	15	53		0.85	11.02		1.02	-4.18	81	26
27	0.41	1.15	117	6		0.51	26.93		0.35	-4.16	110	27
28	0.41	1.17	71	81		0.66	31.57		0.82	-3.99	13	28
29	0.42	1.19	55	19		0.53	19.99		0.13	-3.96	19	29
30	0.43	1.37	107	31		0.86	63.27		0.75	-3.94	46	30
31	0.43	1.50	19	15		0.32	3.51		0.58	-3.90	14	31
32	0.43	1.57	114	53		0.59	3.16		0.58	-3.90	9	32
33	0.42	1.58	101	100		0.17	7.88		0.31	-3.89	21	33
34	0.41	1.73	101	109		0.01	7.67		0.24	-3.88	127	34
35	0.41	1.77	107	12		0.19	8.57		0.63	-3.87	60	35
36	0.41	1.81	103	28		0.43	14.55		0.42	-3.78	55	36
37	0.40	1.85	32	12		0.12	7.54		0.28	-3.76	33	37
38	0.42	2.03	31	12		1.05	17.29		0.88	-3.71	126	38
39	0.41	2.04	18	52		0.30	0.85		0.69	-3.63	19	39
40	0.41	2.06	66	67		0.44	2.79		1.01	-3.63	54	40
41	0.40	2.13	127	33		0.03	17.69		0.02	-3.62	15	41
42	0.40	2.14	85	1		0.32	16.81		0.40	-3.62	99	42
43	0.39	2.24	104	118		0.18	29.46		0.22	-3.52	5	43
44	0.39	2.30	58	123		0.18	1.57		0.59	-3.46	114	44
45	0.40	2.30	14	21		1.06	13.47		0.07	-3.43	53	45
46	0.41	2.33	11	39		0.73	2.24		0.18	-3.42	104	46
47	0.43	2.38	39	63		1.34	17.66		0.24	-3.42	118	47
48	0.43	2.39	35	105		0.23	17.71		0.55	-3.41	36	48
49	0.42	2.43	1	4		0.32	28.63		0.52	-3.38	122	49
50	0.42	2.49	37	85		0.22	4.32		0.28	-3.32	125	50
51	0.42	2.55	15	114		0.64	8.68		0.23	-3.32	37	51
52	0.44	2.58	12	63		1.22	7.94		0.52	-3.31	123	52
53	0.44	2.78	85	67		0.48	14.12		0.53	-3.19	40	53
54	0.45	2.78	84	67		0.91	2.14		0.32	-3.17	85	54
55	0.46	2.79	54	15		1.81	15.44		0.12	-3.17	1	55
56	0.46	2.85	108	79		0.56	19.88		0.18	-3.13	30	56

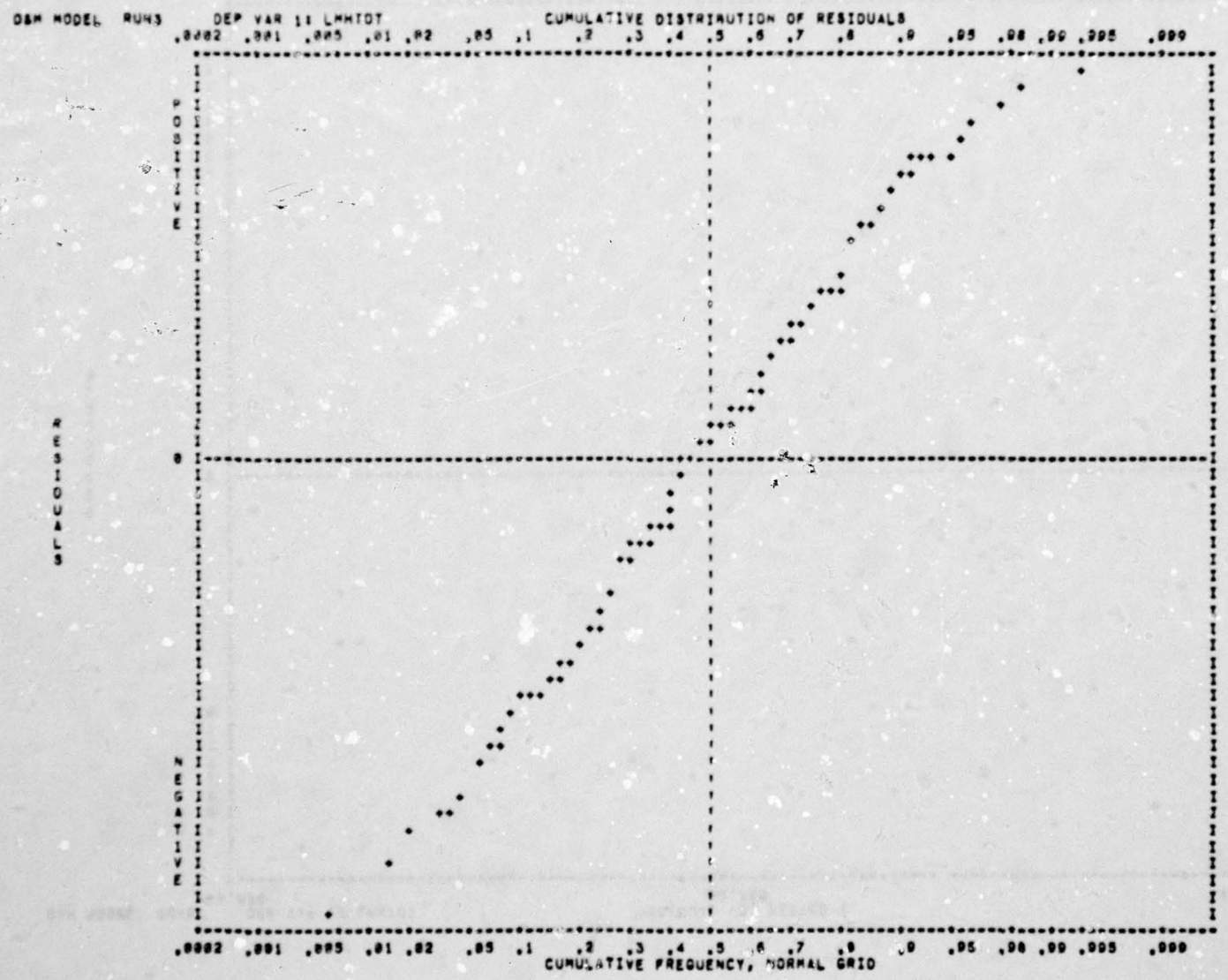
57	0.46	2.87	120	7	0.69	32.46	0.14	-3.10	4	57
58	0.46	2.88	72	73	0.21	31.85	0.41	-3.09	3	58
59	0.46	2.90	6	7	0.67	23.86	0.58	-3.08	59	59
60	0.45	2.96	5	118	0.62	13.86	0.46	-2.98	60	60
61	0.46	2.99	39	81	0.38	8.58	0.37	-2.96	120	61
62	0.45	3.04	107	32	0.31	28.89	0.01	-2.95	36	62
63	0.45	3.06	13	9	0.77	26.83	0.16	-2.92	34	63
64	0.46	3.16	9	21	0.58	18.29	0.85	-2.91	43	64
65	0.46	3.30	123	38	0.18	14.53	0.89	-2.90	106	65
66	0.46	3.47	117	98	0.41	5.26	0.32	-2.90	107	66
67	0.46	3.51	14	8	0.56	7.83	0.54	-2.87	105	67
68	0.46	3.55	21	68	0.55	4.35	1.17	-2.86	31	68
69	0.46	3.65	11	81	0.35	1.85	0.12	-2.79	32	69
70	0.45	3.66	38	76	0.85	11.89	0.38	-2.75	12	70
71	0.45	3.68	126	16	0.52	38.68	0.12	-2.74	93	71
72	0.46	3.72	43	107	0.76	6.81	0.97	-2.74	124	72
73	0.45	3.79	25	27	0.83	16.88	0.64	-2.72	63	73
74	0.46	3.80	35	79	0.33	17.56	0.51	-2.71	97	74
75	0.46	3.84	59	129	0.82	21.58	0.68	-2.66	96	75
76	0.45	3.92	125	85	0.13	78.32	0.79	-2.66	57	76
77	0.45	3.95	27	83	0.56	63.18	0.59	-2.55	44	77
78	0.45	4.03	107	126	0.23	15.67	0.15	-2.52	95	78
79	0.45	4.04	29	27	0.15	6.69	0.56	-2.47	24	79
80	0.44	4.22	43	31	0.18	22.98	0.17	-2.45	41	80
81	0.44	4.32	125	37	0.98	27.81	0.62	-2.45	49	81
82	0.45	4.35	31	32	1.17	46.26	0.79	-2.44	28	82
83	0.44	4.36	1	59	0.84	0.0	0.43	-2.42	85	83
84	0.44	4.44	59	66	0.45	8.91	0.58	-2.42	64	84
85	0.44	4.59	37	24	0.44	19.96	0.98	-2.39	66	85
86	0.44	4.68	9	68	0.85	28.71	0.48	-2.34	113	86
87	0.44	4.70	106	105	0.41	17.63	0.56	-2.32	67	87
88	0.44	4.71	95	49	0.58	19.29	0.34	-2.25	121	88
89	0.43	4.72	42	103	0.98	14.85	0.50	-2.23	18	89
90	0.43	4.83	37	1	0.53	0.72	1.36	-2.21	2	90
91	0.43	4.85	104	125	0.89	52.65	0.43	-2.20	119	91
92	0.43	4.89	71	39	0.28	22.96	0.98	-2.19	31	92
93	0.43	5.18	4	59	0.27	16.74	0.19	-2.17	52	93
94	0.43	5.20	107	105	0.32	41.88	0.65	-2.13	99	94
95	0.43	5.21	120	43	0.51	67.60	0.95	-2.10	78	95
96	0.42	5.27	66	18	0.18	54.51	0.89	-2.08	62	96
97	0.42	5.28	98	6	0.89	1.73	0.91	-2.07	101	97
98	0.43	5.32	11	28	1.58	59.66	0.25	-2.06	109	98
99	0.43	5.38	73	77	0.74	56.74	0.98	-1.98	17	99
100	0.43	5.41	28	13	0.22	43.21	0.44	-1.96	100	100
101	0.43	5.41	96	128	0.11	24.01	0.71	-1.94	48	101
102	0.43	5.57	14	68	0.51	22.59	0.42	-1.98	94	102
103	0.43	5.79	105	12	0.51	18.27	0.12	-1.86	29	103
104	0.43	5.74	105	32	0.63	5.77	0.36	-1.79	82	104
105	0.44	5.77	82	25	0.86	3.79	0.83	-1.77	25	105
106	0.43	5.78	21	55	0.98	41.12	0.98	-1.75	27	106
107	0.43	5.89	43	105	0.44	0.0	0.22	-1.57	92	107
108	0.43	5.92	31	93	0.87	44.30	0.43	-1.57	91	108
109	0.43	5.95	118	37	0.19	15.87	0.29	-1.57	83	109
110	0.44	6.01	104	63	0.97	3.78	0.68	-1.37	89	110
111	0.44	6.01	91	72	0.29	52.59	0.17	-1.32	42	111
112	0.44	6.20	84	77	0.44	2.88	0.21	-1.27	72	112
113	0.44	6.24	79	11	0.95	17.53	1.18	-1.24	73	113
114	0.44	6.24	126	99	0.21	12.69	1.88	-1.23	84	114
115	0.44	6.32	96	95	0.98	28.48	0.62	-1.20	103	115
116	0.43	6.32	82	27	0.93	15.38	0.28	-1.03	77	116
117	0.43	6.34	97	95	0.11	8.96	0.81	-0.95	81	117
118	0.43	6.35	5	104	0.44	9.63	0.82	-0.85	28	118
119	0.43	6.44	99	104	0.84	52.95	0.39	-0.73	60	119

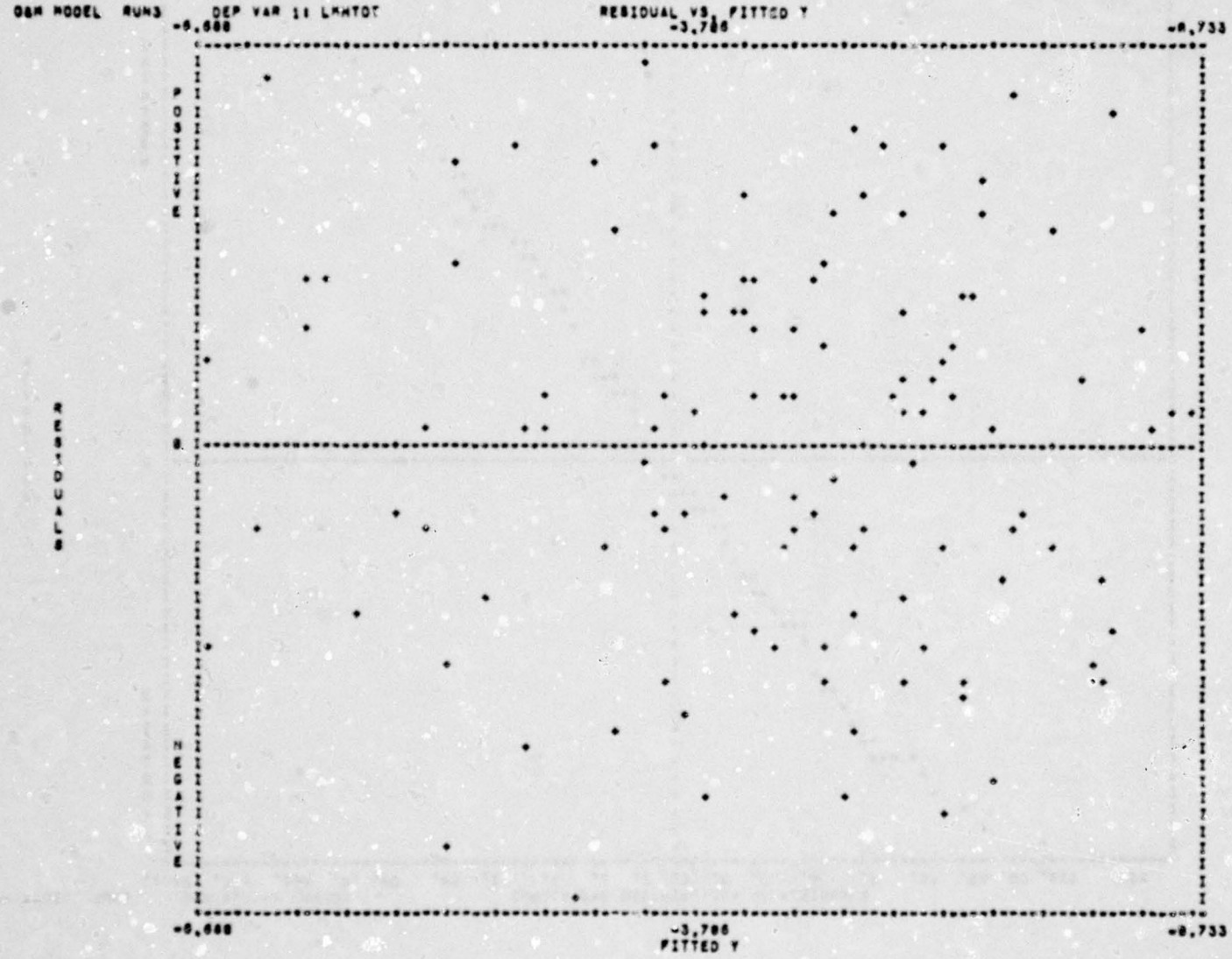
LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN3 DEP VAR IS LMHTOT

IDENT.	OBSV.	WSS DISTANCE	ORDERED BY COMPUTER INPUT: OBS. Y	FITTED Y	RESIDUAL	ORDERED BY RESIDUALS: OBSV.	OBS. Y	FITTED Y	ORDERED RESID.	SEQ
71B2A	1	1.	-3.385	-3.171	-0.213	13	-3.282	-3.992	0.709	1
71L8A	2	7.	-2.971	-2.208	-0.763	58	-5.499	-6.254	0.756	2
71M6A	3	24.	-2.855	-3.087	0.233	25	-1.978	-1.769	0.699	3
71PKA	4	2.	-3.889	-3.899	0.009	84	-0.546	-1.231	0.685	4
71P9A	5	8.	-3.637	-3.520	-0.117	63	-2.889	-2.721	0.632	5
71710	6	20.	-5.661	-5.985	0.325	44	-1.947	-2.552	0.605	6
724GA	7	15.	-6.023	-5.677	-0.345	119	-1.681	-2.199	0.598	7
71FAA	9	4.	-3.875	-3.899	0.024	74	-4.187	-4.785	0.598	8
71F8A	10	10.	-3.992	-3.663	-0.329	14	-3.314	-3.903	0.588	9
71CAA	11	5.	-5.328	-4.361	-0.938	198	-4.595	-5.091	0.587	10
71DAA	12	4.	-3.344	-2.753	-0.590	28	-3.718	-4.283	0.573	11
51EAA	13	5.	-3.282	-3.992	0.709	17	-1.425	-1.964	0.548	12
52AAA	14	7.	-3.314	-3.903	0.588	118	-2.911	-3.415	0.504	13
52A9A	15	18.	-3.322	-3.625	0.303	96	-2.179	-2.681	0.502	14
63B0A	16	12.	-5.497	-5.315	-0.182	64	-1.943	-2.421	0.478	15
71AF8	17	21.	-1.425	-1.964	0.548	31	-4.398	-2.859	0.460	16
74JA8	18	6.	-2.432	-2.226	-0.206	199	-1.498	-1.955	0.457	17
74JC8	19	7.	-3.649	-3.632	-0.017	110	-3.722	-4.162	0.440	18
52GA1	20	5.	-3.718	-4.283	0.573	83	-1.132	-1.566	0.434	19
71ZA8	21	5.	-4.388	-3.894	-0.474	43	-2.553	-2.911	0.358	20
73EGA	24	13.	-2.216	-2.472	0.258	35	-4.783	-5.135	0.352	21
73EP8	25	24.	-1.978	-1.769	0.699	128	-5.520	-5.861	0.341	22
73M48	26	25.	-0.793	-0.547	0.955	80	-2.853	-2.579	0.325	23
73MC8	27	14.	-1.878	-1.749	-0.130	6	-5.681	-5.985	0.325	24
73N48	28	31.	-2.382	-2.444	0.142	194	-3.897	-3.428	0.324	25
730BA	29	11.	-2.137	-1.858	-0.279	37	-3.881	-3.328	0.319	26
738C8	30	13.	-3.217	-3.125	-0.091	15	-3.322	-3.625	0.303	27
73K8A	31	2.	-2.399	-2.859	0.460	189	-1.765	-2.058	0.293	28
73KEA	32	4.	-3.494	-2.706	-0.789	191	-1.787	-2.071	0.284	29
73XFA	33	3.	-3.948	-3.763	-0.186	99	-3.338	-3.618	0.281	30
73KKA	34	13.	-2.728	-2.919	0.199	58	-3.145	-3.413	0.267	31
75933	35	9.	-4.783	-5.135	0.352	24	-2.216	-2.472	0.256	32
74B0A	36	8.	-2.739	-2.958	0.219	53	-3.184	-3.434	0.250	33
74BF8	37	5.	-3.881	-3.328	0.319	77	-0.785	-1.026	0.241	34
7481P	38	41.	-5.473	-5.450	-0.023	125	-3.548	-3.325	0.236	35
78A1A	39	7.	-4.426	-4.226	-0.199	3	-2.855	-3.087	0.233	36
76GAA	40	18.	-3.618	-3.194	-0.424	98	-5.777	-6.008	0.231	37
74FF8	41	28.	-2.768	-2.453	-0.307	36	-2.739	-2.958	0.219	38
74FA8	42	21.	-1.775	-1.328	-0.435	34	-2.728	-2.919	0.199	39
74FH8	43	6.	-2.553	-2.911	0.358	98	-1.948	-2.125	0.185	40
74FUA	44	54.	-1.947	-2.552	0.605	51	-2.819	-2.191	0.171	41
73CGA	45	43.	-4.897	-3.939	-0.159	88	-6.529	-6.688	0.153	42
74FC8	46	13.	-1.925	-1.938	0.013	89	-1.231	-1.375	0.143	43
74FJA	49	3.	-2.929	-2.453	-0.477	28	-2.382	-2.444	0.142	44
74FKA	50	18.	-5.499	-6.254	0.756	121	-2.116	-2.251	0.135	45
74FQ2	51	28.	-2.819	-2.191	0.171	95	-2.428	-2.524	0.103	46
74KAA	52	8.	-2.881	-2.171	0.089	85	-3.871	-3.174	0.103	47
74KC8	53	8.	-3.184	-3.434	0.250	123	-3.217	-3.309	0.092	48
74CA8	54	6.	-4.335	-3.626	-0.709	4	-3.999	-3.999	0.000	49
74CB3	55	8.	-4.338	-3.779	-0.551	52	-2.881	-2.171	0.089	50
74CC8	56	9.	-4.558	-4.589	0.030	71	-4.488	-4.572	0.084	51
74FA1	57	18.	-2.859	-2.677	-0.182	68	-3.792	-3.871	0.079	52
74E88	58	7.	-3.145	-3.413	0.267	69	-0.857	-0.733	0.077	53
73PH8	59	5.	-3.257	-3.081	-0.176	126	-3.649	-3.788	0.067	54
73P8A	60	39.	-0.657	-0.732	0.077	26	-0.793	-0.847	0.055	55
73PD8	61	21.	-0.919	-0.953	0.044	65	-2.368	-2.421	0.053	56
73PF8	62	25.	-2.693	-2.884	0.520	113	-2.293	-2.344	0.052	57

73PHA	83	5.	-2,889	-2,721	0,632	61	-0,910	-0,953	0,044	59
71NAP	84	4.	-1,943	-2,421	0,478	86	-4,550	-4,589	0,039	59
71QUP	85	4.	-2,368	-2,421	0,053	76	-5,245	-5,272	0,026	60
63AAP	86	4.	-2,416	-2,390	-0,025	9	-3,675	-3,699	0,024	61
65AAP	87	5.	-2,752	-2,323	-0,429	79	-4,687	-4,710	0,023	62
63AGP	88	5.	-3,792	-3,831	0,039	48	-1,925	-1,938	0,013	63
63PPA	74	17.	-5,631	-5,476	-0,155	91	-1,565	-1,574	0,008	64
7,ABE	71	18.	-4,488	-4,572	0,084	97	-2,717	-2,710	-0,008	65
71ADA	72	16.	-1,556	-1,273	-0,282	19	-3,649	-3,632	-0,017	66
73DBA	73	11.	-1,737	-1,241	-0,496	38	-5,473	-5,450	-0,023	67
71ACC	74	55.	-4,187	-4,785	0,598	66	-2,416	-2,390	-0,026	68
73CBQ	75	59.	-5,613	-5,178	-0,435	10	-3,892	-3,863	-0,029	69
73CEN	76	46.	-5,245	-5,272	0,028	105	-2,948	-2,868	-0,080	70
73CFK	77	7.	-0,785	-1,026	0,241	30	-3,217	-3,125	-0,091	71
73DAM	78	23.	-2,584	-2,807	-0,467	5	-3,637	-3,520	-0,117	72
73EBC	79	16.	-4,687	-4,710	0,023	27	-1,879	-1,749	-0,130	73
73EHP	80	11.	-2,803	-2,979	0,325	33	-3,900	-3,763	-0,136	74
71CAA	81	11.	-4,754	-4,176	-0,578	78	-5,631	-5,476	-0,155	75
73EGA	82	16.	-1,949	-1,789	-0,159	120	-3,118	-2,962	-0,155	76
73HCA	83	15.	-1,132	-1,566	0,434	46	-4,097	-3,939	-0,159	77
73LAP	84	8.	-0,548	-1,231	0,685	82	-1,949	-1,789	-0,159	78
77ECA	85	2.	-3,871	-3,174	0,103	127	-4,039	-3,875	-0,164	79
77EEA	86	55.	-7,899	-6,683	-0,416	59	-3,257	-3,081	-0,176	80
77DBA	88	55.	-6,528	-6,668	0,153	117	-6,471	-6,291	-0,181	81
78AEA	89	19.	-1,231	-1,375	0,143	57	-2,859	-2,677	-0,182	82
73KAP	90	8.	-1,948	-2,125	0,185	18	-5,497	-5,315	-0,182	83
63BAA	91	12.	-1,565	-1,574	0,008	39	-4,426	-4,226	-0,199	84
63CAA	92	12.	-1,760	-1,574	-0,186	18	-2,432	-2,226	-0,206	85
65BAA	93	7.	-2,952	-2,738	-0,214	92	-1,782	-1,574	-0,208	86
61B3A	94	6.	-2,596	-1,981	-0,615	1	-3,385	-3,171	-0,213	87
61AAP	95	6.	-2,428	-2,524	0,103	93	-2,952	-2,736	-0,214	88
61ABP	96	7.	-2,179	-2,681	0,502	29	-2,137	-1,858	-0,279	89
61ACP	97	9.	-2,717	-2,710	-0,008	72	-1,556	-1,273	-0,282	90
72AAP	98	33.	-5,777	-6,088	0,231	41	-2,748	-2,403	-0,387	91
72ACP	99	7.	-3,338	-3,618	0,281	112	-5,265	-4,951	-0,314	92
71CAP	100	15.	-1,498	-1,955	0,457	124	-3,074	-2,738	-0,336	93
72EAA	101	12.	-1,787	-2,071	0,284	114	-3,801	-3,462	-0,339	94
72DPQ	103	22.	-1,579	-1,201	-0,378	7	-6,823	-6,677	-0,346	95
71JAP	104	3.	-3,897	-3,428	0,324	103	-1,579	-1,201	-0,378	96
71LAP	105	5.	-2,948	-2,858	-0,850	122	-3,744	-3,360	-0,384	97
72DNB	106	14.	-3,392	-2,904	-0,488	107	-3,388	-2,982	-0,398	98
72ACA	107	2.	-3,388	-2,992	-0,396	86	-7,898	-6,658	-0,418	99
71715	108	13.	-4,885	-5,891	0,587	48	-3,618	-3,194	-0,424	100
71310	109	16.	-1,785	-2,858	0,293	67	-2,752	-2,323	-0,429	101
72RPA	110	14.	-3,722	-4,162	0,449	75	-5,613	-5,178	-0,435	102
72HBP	111	29.	-5,325	-4,697	-0,628	42	-1,775	-1,320	-0,455	103
71JCE	112	14.	-5,285	-4,951	-0,314	78	-2,564	-2,097	-0,467	104
72AEP	113	15.	-2,293	-2,344	0,052	21	-4,368	-3,894	-0,474	105
72CCP	114	5.	-3,801	-3,462	-0,339	49	-2,929	-2,453	-0,477	106
71ZBP	116	17.	-5,982	-5,199	-0,783	126	-3,392	-2,904	-0,488	107
71ZDP	117	27.	-6,471	-6,291	-0,181	73	-1,737	-1,241	-0,496	108
65AAA	118	5.	-2,911	-3,415	0,504	62	-2,693	-2,984	-0,529	109
63AFP	119	9.	-1,881	-2,199	0,598	55	-4,338	-3,779	-0,551	110
63AAA	120	2.	-3,118	-2,962	-0,155	81	-4,754	-4,176	-0,578	111
63121	121	9.	-2,116	-2,251	0,135	12	-3,344	-2,753	-0,590	112
63AAA	122	15.	-3,744	-3,360	-0,384	111	-5,325	-4,697	-0,628	113
55ALP	123	7.	-3,217	-3,389	0,092	94	-2,598	-1,991	-0,805	114
55AVB	124	14.	-3,974	-0,738	-0,336	32	-3,494	-2,786	-0,709	115
61AAP	125	3.	-0,886	-3,025	0,236	54	-4,335	-3,626	-0,709	116
61AEA	126	7.	-3,648	-3,798	0,057	2	-2,971	-2,208	-0,763	117
62AAP	128	6.	-4,039	-3,875	-0,164	116	-6,882	-5,199	-0,883	118
64211	126	28.	-5,528	-6,861	0,341	11	-5,328	-4,391	-0,938	119


D&M MODEL RUN3
DEP VAR 11 LMHTOT
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
STANDARDIZED RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID


O&M MODEL RUN3 DEP VAR IS LMHTOT
RESIDUAL VS. FITTED Y
-8,688
-3,786
-8,733
POSITIVE
RESIDUALS
0
NEGATIVE
-8,688
-3,786
FITTED Y
-8,733

EQUATION	P	CP	VARIABLES IN EQUATION																		
	81	21,0	FULL EQUATION																		
	18	25,7	BASIC SET OF VARIABLES				2 FIGCOM	3 BOMNAV	4 BOMCOM	CD	5	SS	7	MDI	8	MEM	9	DUP	11	DCC	12	DDI	13
				DEM 14	DUP 17	LUP 18		LVD 19	LNT 20														
			RMS = 0,19349																				
1	17	22,9	BASIC SET PLUS				1 FIGSEN																
			RMS = 0,18766																				
2	19	22,8	BASIC SET PLUS				1 FIGSEN	XT 6		MPS 10													
			RMS = 0,18359																				
3	18	22,8	BASIC SET PLUS				1 FIGSEN	MPS 10															
			RMS = 0,18398																				
4	18	22,8	BASIC SET PLUS				MPS 10	DPS 15															
			RMS = 0,18398																				
5	20	21,3	BASIC SET PLUS				1 FIGSEN	MPS 10		DPS 15													
			RMS = 0,18185																				
6	20	22,1	BASIC SET PLUS				1 FIGSEN	XT 6		MPS 10		DPS 15											
			RMS = 0,18978																				
7	19	22,4	BASIC SET PLUS				XT 6	MPS 10		DPS 15													
			RMS = 0,18298																				
8	18	22,8	BASIC SET PLUS				1 FIGSEN	DPS 15															
			RMS = 0,18399																				
9	19	21,8	BASIC SET PLUS				1 FIGSEN	DPS 15		DPD 16													
			RMS = 0,18198																				
10	20	22,2	BASIC SET PLUS				1 FIGSEN	XT 6		DPS 15		DPD 16											
			RMS = 0,18974																				
11	20	22,1	BASIC SET PLUS				XT 6	MPS 10		DPS 15		DPD 16											
			RMS = 0,18962																				
12	21	21,8	BASIC SET PLUS				1 FIGSEN	XT 6		MPS 10		DPS 15		DPD 16									
			RMS = 0,17892																				
13	20	21,8	BASIC SET PLUS				1 FIGSEN	MPS 10		DPS 15		DPD 16											
			RMS = 0,17986																				

```
    14  19  23,8  BASIC SET PLUS                    MPS 18      DPS 15      DPD 18
                   RMS =    0.18393

    15  19  22,8  BASIC SET PLUS          1
                                        FIGSEN  MPS 18      DPD 16
                   RMS =    0.18218

    16  20  21,1  BASIC SET PLUS          1
                                        FIGSEN  XT   6      MPS 18      DPD 16
                   RMS =    0.17898

    17  19  22,4  BASIC SET PLUS          1
                                        FIGSEN  XT   6      DPD 16
                   RMS =    0.18289

    18  18  22,2  BASIC SET PLUS          1
                                        FIGSEN  DPD 16
                   RMS =    0.18425

SWEEP NUMBER        31.  DELTA Z(K,K) =  2.0-16

ESTIMATE OF VARIANCE

NO SMALLER RMS VALUE FOUND IN SUBSET EQUATIONS

RMS OF FULL EQUATION SELECTED BY USER TO CALCULATE CP VALUES


 SEQ  EQUATION   P   ORDERED CP
   1       12   21      21.0
   2       16   20      21.1
   3        5   19      21.3
   4       13   20      21.5
   5        9   19      21.8
   6       15   19      22.0
   7        4   18      22.0
   8        3   18      22.2
   9        8   18      22.0
  10       11   20      22.1
  11        6   20      22.1
  12       10   20      22.2
  13       18   18      22.2
  14       17   19      22.4
  15        7   19      22.4
  16        2   19      22.8
  17        1   17      22.0
  18       14   19      23.0
```

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN4 DEP VAR 11 LMHUNS MIN Y = -7.4770 00 MAX Y = -1.6320 00 RANGE Y = 5.8450 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPOS" MODEL
LMHUNS = B(0) + B(1)*FIGSEN + B(2)FIGCOM + B(3)BOMNAV + B(4)BOMCOM
+ B(5)OI + B(6)SS + B(7)MCC + B(8)MEM + B(9)MPD
+ B(10)OVO + B(11)OCC + B(12)OCO + B(13)OEM + B(14)OPD
+ B(15)OUP + B(16)LUP + B(17)LWT + B(18)LPD
LMHUNS = LN(MMHUNS)
MMHUNS = UNSCHEDULED MAINTENANCE MANHOURS PER OPERATING HOUR

IND.VAR(I)	NAME	COEF.B(I)	S.E. COEF.	T-VALUE	R(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL.INF.X(I)
0		-9.991490 00							
1	FIGSEN	-2.499990-01	1.120-01	2.2	0.2631	0.0	1.0000 00	1.0000 00	0.04
2	FIGCOM	3.499720-01	1.980-01	1.7	0.1103	0.0	1.0000 00	1.0000 00	0.06
3	BOMNAV	8.707140-01	1.510-01	5.8	0.3142	0.0	1.0000 00	1.0000 00	0.15
4	BOMCOM	4.945860-01	1.630-01	3.0	0.1266	0.0	1.0000 00	1.0000 00	0.08
5	OI	-7.508740-03	1.470-03	5.1	0.4766	0.0	1.0000 02	1.0000 02	0.13
6	SS	-1.112540-02	2.090-03	5.3	0.7061	0.0	1.0000 02	1.0000 02	0.19
7	MCC	1.888820-04	4.270-05	4.4	0.5675	-1.1680 03	7.1220 03	8.2960 03	0.27
8	MEM	-1.749620-02	2.510-03	7.1	0.8972	-1.0220 01	8.0880 01	1.0900 02	0.38
9	MPD	-5.333580-04	1.760-04	3.0	0.7351	-3.3220 02	2.6650 03	2.9970 03	0.27
10	OVO	2.144930-08	1.410-08	1.5	0.4796	4.4890 03	2.4550 07	2.4550 07	0.09
11	OCC	-4.522370-08	1.310-08	3.4	0.3624	7.2998 02	2.8560 07	2.8560 07	0.22
12	OCO	5.736760-02	2.970-02	2.0	0.3088	1.7840-04	1.8610 01	1.8610 01	0.18
13	OEM	-1.629160-04	7.850-05	2.1	0.0667	2.7940 01	3.0470 03	3.0260 03	0.08
14	OPD	3.437380-07	1.320-07	2.6	0.4829	7.2990 02	4.1880 06	4.1880 06	0.24
15	OUP	5.190280-01	1.430-01	3.6	0.1185	2.8250-01	2.1030 00	1.0000 00	0.17
16	LUP	4.633580-01	4.460-02	10.4	0.7035	5.0300 00	1.3250 01	8.2170 00	0.65
17	LWT	3.878180-01	7.420-02	4.1	0.7549	0.0	5.1570 00	5.1570 00	0.27
18	LPD	2.527910-0[illegible]	7.190-02	3.5	0.0517	1.0000 00	8.0860 00	6.0880 00	0.38

NO. OF OBSERVATIONS	119
NO. OF IND. VARIABLES	18
RESIDUAL DEGREES OF FREEDOM	100
F-VALUE	46.5
RESIDUAL ROOT MEAN SQUARE	0.44038485
RESIDUAL MEAN SQUARE	0.19388636
RESIDUAL SUM OF SQUARES	19.38863616
TOTAL SUM OF SQUARES	109.11858723
MULT. CORREL. COEF. SQUARED	.8975

REQUIRED X(I) PRECISION
(DIGIT RIGHT OF DECIMAL POSITIVE,
LEFT OF DECIMAL NEGATIVE)

IND.VAR(I)	DIGIT
1	-1
2	-1
3	-1
4	-1
5	-2
6	-2
7	-4
8	-2
9	-3
10	-7
11	-7
12	-1
13	-4
14	-8
15	1
16	1
17	1
18	1

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN4 DEP VAR IS LMHUNS RESIDUAL ROOT MEAN SQUARE OF FITTED EQUATION: 0.44

STANDARD DEVIATION ESTIMATED FROM RESIDUALS OF NEIGHBORING OBSERVATIONS (OBSERVATIONS 1 TO 4 APART IN FITTED Y ORDER).

NO.	CUMULATIVE STD DEV	ORDERED BY WSSD				ORDERED BY FITTED Y					
		WSSD	OBSV.	OBSV.	DEL RESIDUALS	WSSD	DEL RESIDUALS	FITTED Y	OBSV.	SEQ.
1	0.00	0.0	92	91	0.38	6.88	0.24	-7.17	117	1
2	0.38	0.0	65	64	0.48	7.94	0.42	-7.05	78	2
3	0.43	0.0	88	88	0.56	28.54	0.57	-6.95	98	3
4	0.42	0.00	121	119	0.41	0.0	0.56	-6.75	88	4
5	0.35	0.02	53	58	0.07	25.35	1.06	-6.75	86	5
6	0.33	0.03	109	108	0.02	8.71	0.15	-6.70	128	6
7	0.28	0.13	14	13	0.19	3.45	0.57	-6.56	58	7
8	0.38	0.23	31	128	1.11	0.56	0.94	-6.49	35	8
9	0.41	0.37	128	6	0.83	2.39	0.11	-6.47	16	9
10	0.37	0.43	119	108	0.06	1.48	0.42	-6.42	6	10
11	0.39	0.47	75	74	0.58	2.49	0.25	-6.18	116	11
12	0.47	0.47	49	63	1.40	2.68	1.41	-6.13	7	12
13	0.49	0.50	6	108	0.74	29.62	0.59	-6.10	108	13
14	0.46	0.54	119	109	0.94	14.68	0.20	-5.94	38	14
15	0.49	0.58	35	16	0.94	27.18	0.18	-5.92	112	15
16	0.47	0.62	62	17	0.30	0.47	0.58	-5.71	75	16
17	0.48	0.63	71	81	0.51	18.78	0.38	-5.58	74	17
18	0.45	0.68	58	114	0.83	7.11	0.75	-5.56	71	18
19	0.43	0.75	53	114	0.94	6.97	1.08	-5.52	11	19
20	0.42	0.78	29	48	0.17	24.38	1.14	-5.50	58	20
21	0.43	0.81	56	54	0.55	27.76	0.31	-5.39	111	21
22	0.41	0.81	65	65	0.18	10.42	0.89	-5.37	81	22
23	0.44	0.88	13	9	1.15	8.28	0.14	-5.30	39	23
24	0.47	0.98	119	2	1.71	22.78	0.15	-5.28	79	24
25	0.49	0.99	116	108	1.18	28.35	0.74	-5.27	76	25
26	0.49	1.01	107	37	0.39	3.98	0.23	-5.18	126	26
27	0.52	1.03	82	68	1.38	4.75	0.56	-4.99	99	27
28	0.50	1.06	1	123	0.07	4.23	0.25	-4.87	68	28
29	0.52	1.14	27	17	0.98	32.88	0.11	-4.89	127	29
30	0.50	1.16	19	54	0.04	28.69	0.52	-4.87	46	30
31	0.49	1.19	59	49	0.28	13.58	0.01	-4.85	14	31
32	0.48	1.22	12	49	0.05	13.04	0.18	-4.81	119	32
33	0.48	1.49	6	116	0.42	5.93	0.31	-4.81	13	33
34	0.47	1.52	117	98	0.19	11.29	0.49	-4.77	33	34
35	0.46	1.53	4	1	0.27	6.78	1.33	-4.74	28	35
36	0.46	1.63	81	79	0.54	2.32	0.69	-4.73	9	36
37	0.45	1.63	55	19	0.07	6.89	0.27	-4.67	104	37
38	0.47	1.64	2	109	0.04	14.78	0.12	-4.67	55	38
39	0.49	1.68	12	63	1.35	14.28	0.16	-4.65	10	39
40	0.48	1.69	54	58	0.31	3.38	0.21	-4.65	21	40
41	0.47	1.69	87	129	0.91	9.18	0.58	-4.60	15	41
42	0.49	1.73	59	63	1.12	1.98	0.68	-4.58	118	42
43	0.50	1.79	31	67	1.11	11.92	0.07	-4.55	5	43
44	0.49	1.79	37	85	0.17	10.18	1.08	-4.52	19	44
45	0.49	1.89	53	54	0.24	6.51	0.80	-4.48	97	45
46	0.49	1.95	16	108	0.64	1.89	0.24	-4.46	53	46
47	0.50	1.95	2	139	0.98	1.69	0.31	-4.43	54	47
48	0.51	1.97	17	69	1.08	5.37	0.51	-4.42	58	48
49	0.51	1.98	118	5	0.58	3.63	0.48	-4.28	32	49
50	0.51	1.99	128	15	0.52	18.41	0.58	-4.29	114	50
51	0.52	2.10	49	66	0.72	18.21	0.11	-4.27	3	51
52	0.51	2.25	1	107	0.13	1.53	0.27	-4.27	4	52
53	0.52	2.28	82	97	1.28	2.26	0.13	-4.25	1	53
54	0.52	2.31	128	35	0.42	1.91	0.39	-4.22	107	54
55	0.52	2.32	18	116	0.53	9.86	0.27	-4.21	37	55
56	0.52	2.32	9	104	0.69	12.36	0.96	-4.20	49	56
57	0.54	2.36	35	116	1.47	8.30	0.18	-4.18	125	57
58	0.53	2.37	54	114	0.28	3.44	0.92	-4.17	36	58

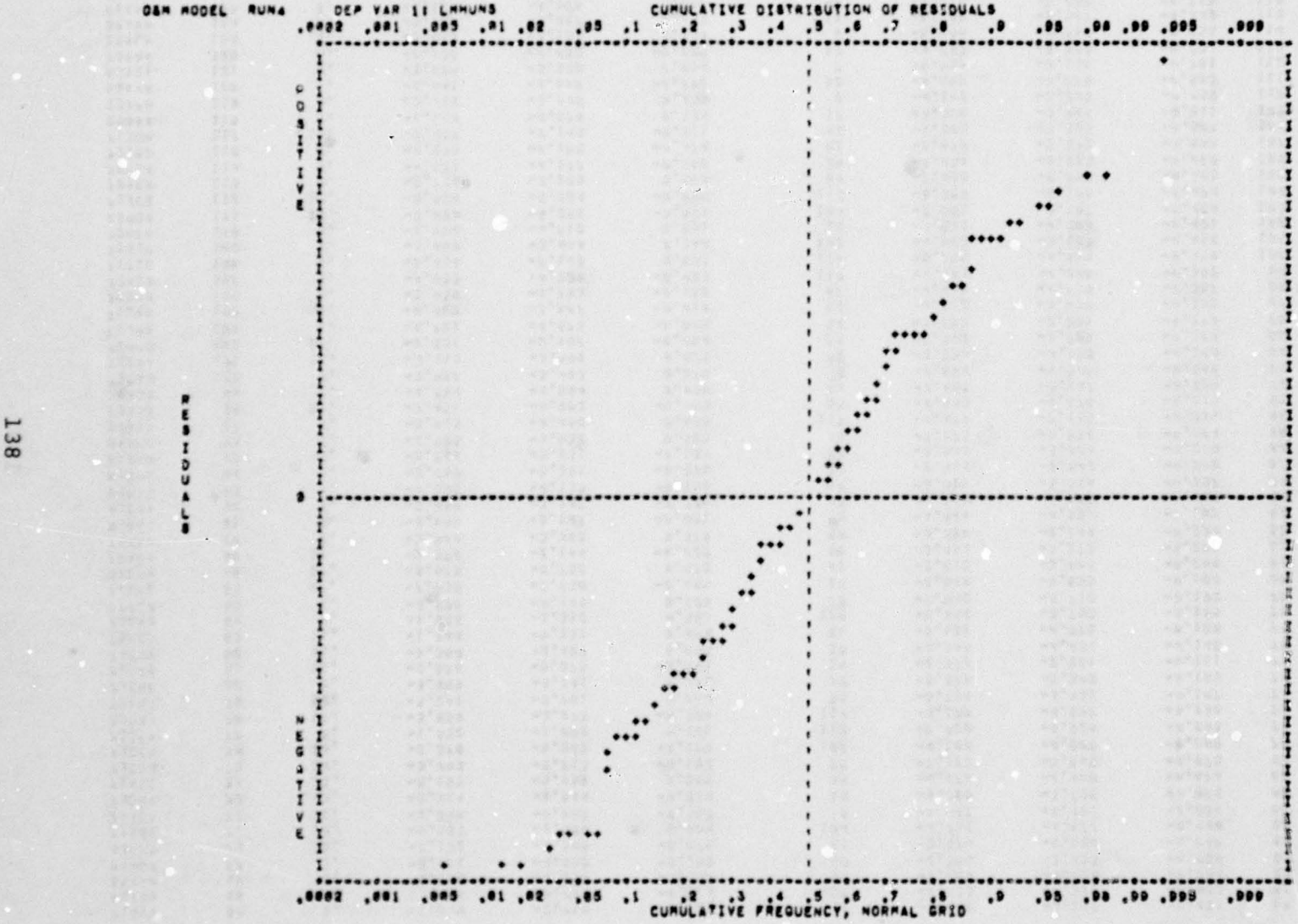
59	0.52	2.37	129	59	0.12	3.18	0.44	-4.14	85	59
60	0.53	2.37	6	7	0.67	14.58	0.63	-4.14	93	60
61	0.53	2.39	16	7	0.77	18.82	0.25	-4.11	38	61
62	0.52	2.39	16	6	0.11	12.58	0.96	-4.10	34	62
63	0.52	2.39	104	21	0.01	2.93	0.58	-4.19	123	63
64	0.51	2.40	9	55	0.42	6.78	0.31	-4.07	31	64
65	0.52	2.40	126	127	1.04	8.87	0.57	-4.06	122	65
66	0.52	2.45	30	123	0.23	1.69	0.01	-4.06	87	66
67	0.51	2.46	125	85	0.16	3.73	0.92	-4.05	120	67
68	0.51	2.49	116	7	0.25	18.28	0.23	-4.03	96	68
69	0.52	2.54	98	128	1.07	28.27	0.42	-3.98	43	69
70	0.51	2.56	21	118	0.37	26.77	1.22	-3.92	44	70
71	0.51	2.57	52	124	0.15	2.66	0.22	-3.89	59	71
72	0.50	2.58	85	21	0.28	1.22	0.95	-3.87	12	72
73	0.52	2.60	7	128	1.41	8.52	0.62	-3.83	49	73
74	0.53	2.62	113	62	1.28	4.75	0.78	-3.79	126	74
75	0.52	2.66	15	19	0.19	16.72	0.34	-3.77	83	75
76	0.52	2.66	59	12	0.22	18.33	0.34	-3.74	88	76
77	0.52	2.67	124	125	0.57	0.81	0.18	-3.73	35	77
78	0.51	2.67	127	125	0.96	0.0	0.48	-3.72	65	78
79	0.52	2.68	43	59	0.80	9.82	0.91	-3.72	64	79
80	0.52	2.71	35	6	1.05	17.47	0.56	-3.69	121	80
81	0.52	2.71	26	103	0.35	2.79	0.12	-3.66	52	81
82	0.52	2.74	126	68	0.79	5.53	0.27	-3.63	95	82
83	0.52	2.75	9	21	0.78	15.34	0.37	-3.62	124	83
84	0.53	2.75	17	25	0.75	37.93	0.23	-3.61	41	84
85	0.52	2.78	52	95	0.12	11.97	0.44	-3.59	121	85
86	0.53	2.80	58	116	0.98	17.98	0.77	-3.59	105	86
87	0.52	2.81	33	104	0.15	17.43	0.81	-3.58	28	87
88	0.52	2.85	93	34	0.34	11.54	0.78	-3.55	18	88
89	0.52	2.93	123	31	0.58	0.98	1.91	-3.55	119	89
90	0.52	3.00	2	94	0.19	1.93	0.96	-3.54	2	90
91	0.51	3.00	126	99	0.23	0.93	0.92	-3.48	109	91
92	0.51	3.13	68	14	0.38	10.66	0.98	-3.48	109	92
93	0.52	3.17	93	31	0.98	4.25	0.76	-3.38	98	93
94	0.51	3.18	85	93	0.44	11.87	1.92	-3.38	94	94
95	0.51	3.20	13	104	0.46	5.83	0.67	-3.38	24	95
96	0.51	3.22	114	1	0.20	12.22	0.28	-3.32	29	96
97	0.51	3.23	39	126	0.45	12.82	0.89	-3.30	57	97
98	0.51	3.29	114	4	0.47	27.77	0.18	-3.27	48	98
99	0.51	3.29	19	58	0.35	38.75	0.84	-3.23	78	99
100	0.50	3.32	85	123	0.84	12.41	0.47	-3.21	113	100
101	0.51	3.33	35	7	1.71	38.27	0.32	-3.15	51	101
102	0.51	3.38	21	15	0.01	0.0	0.38	-3.15	92	102
103	0.51	3.42	19	53	0.28	28.14	0.79	-3.15	91	103
104	0.50	3.44	36	85	0.02	39.42	0.45	-3.04	62	104
105	0.50	3.45	58	35	0.57	29.52	0.75	-3.03	72	105
106	0.51	3.47	33	6	0.84	1.14	0.99	-2.93	27	106
107	0.50	3.48	66	52	0.98	1.97	1.98	-2.89	17	107
108	0.50	3.49	123	129	0.54	38.44	0.84	-2.88	80	108
109	0.51	3.57	83	66	0.68	39.86	0.51	-2.84	73	109
110	0.50	3.67	32	114	0.48	7.55	0.18	-2.58	25	110
111	0.50	3.68	31	98	0.20	38.68	0.11	-2.43	82	111
112	0.51	3.73	128	96	0.92	29.98	0.41	-2.33	61	112
113	0.50	3.75	82	84	0.38	14.64	0.47	-2.32	84	113
114	0.50	3.76	84	83	0.12	6.83	0.78	-2.26	26	114
115	0.50	3.79	1	37	0.26	5.42	1.38	-2.26	42	115
116	0.50	3.79	42	103	0.35	6.18	0.95	-2.23	83	116
117	0.49	3.84	68	25	0.33	9.84	0.23	-2.19	103	117
118	0.49	3.90	4	107	0.48	18.47	0.42	-2.14	89	118
119	0.49	3.91	50	16	0.37	1.52	0.19	-1.82	77	119

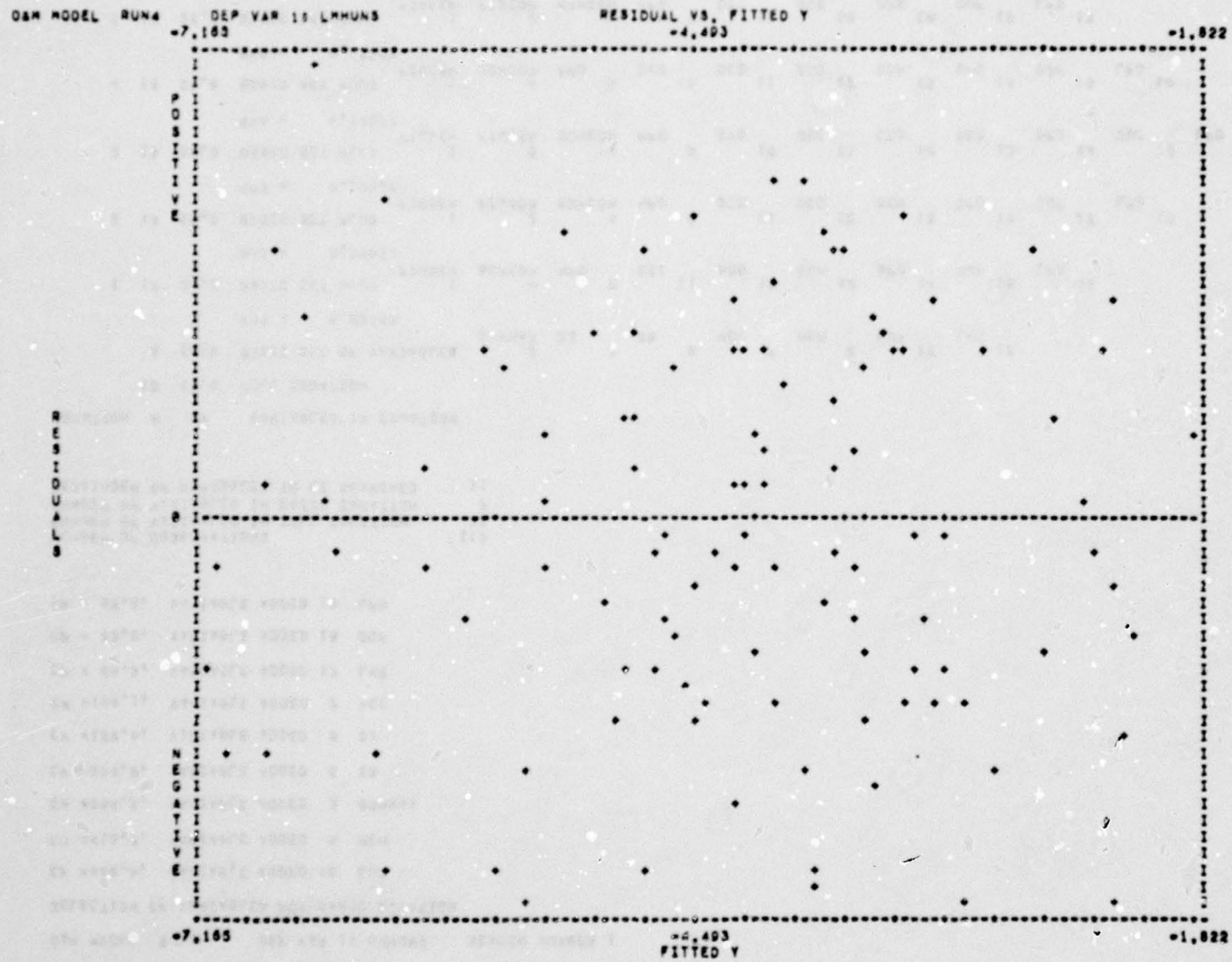
LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

D&M MODEL RUN4 DEP VAR IS (MMUNS

ORDERED BY COMPUTER INPUT						ORDERED BY RESIDUALS				
IDENT.	OBSV.	X35 DISTANCE	OBS. Y	FITTED Y	RESIDUAL	OBSV.	OBS. Y	FITTED Y	ORDERED RESID.	SEQ
71B28	1	1.	-4.150	-4.248	0.098	35	-5.493	-4.486	0.993	1
71L98	2	3.	-4.113	-3.545	-0.569	31	-3.347	-4.069	0.722	2
71M6B	3	13.	-3.797	-4.274	0.477	44	-3.293	-3.415	0.712	3
71P6B	4	1.	-3.897	-4.265	0.368	108	-5.414	-6.105	0.691	4
71P88	5	4.	-4.894	-4.547	-0.348	97	-3.825	-4.488	0.655	5
71T1B	6	12.	-6.475	-6.421	-0.054	24	-2.748	-3.378	0.638	6
72G6B	7	8.	-6.856	-6.135	-0.721	126	-4.547	-5.179	0.632	7
71FAB	8	1.	-5.466	-4.738	-0.736	63	-3.168	-3.774	0.614	8
71F9B	10	8.	-4.849	-4.655	-0.194	28	-4.155	-4.744	0.598	9
71C4B	11	4.	-6.266	-5.517	-0.749	64	-3.131	-3.706	0.585	10
71DAB	12	2.	-4.597	-3.866	-0.731	101	-3.115	-3.688	0.576	11
71EAB	13	2.	-4.396	-4.807	0.411	128	-6.126	-6.701	0.573	12
72AAB	14	2.	-4.838	-4.853	0.217	68	-2.989	-2.659	0.570	13
72A8A	15	4.	-4.844	-4.599	-0.245	96	-3.528	-4.052	0.525	14
6380B	16	9.	-6.419	-6.472	0.054	93	-1.746	-2.231	0.484	15
71AE6	17	11.	-3.398	-2.887	-0.511	3	-3.797	-4.274	0.477	16
74JAB	18	3.	-3.811	-3.554	-0.257	113	-2.736	-3.208	0.470	17
74JCB	19	5.	-4.925	-4.504	-0.421	119	-3.119	-3.548	0.439	18
72GA1	20	6.	-4.155	-4.744	0.590	58	-6.134	-6.558	0.424	19
71ZAB	21	2.	-4.889	-4.654	-0.235	13	-4.396	-4.807	0.411	20
73EGB	24	7.	-3.748	-3.378	0.638	99	-4.594	-4.994	0.400	21
73EPB	25	16.	-2.337	-2.578	0.241	109	-3.888	-3.486	0.394	22
73HAB	26	18.	-2.372	-2.261	-0.111	74	-5.195	-5.582	0.386	23
73HCB	27	8.	-2.543	-2.928	0.385	27	-2.543	-2.928	0.385	24
73N4B	28	15.	-3.287	-3.559	0.352	89	-3.984	-3.383	0.379	25
73QPB	29	6.	-3.359	-3.323	-0.036	109	-3.827	-3.483	0.376	26
73TCB	30	8.	-3.743	-4.114	0.371	30	-3.743	-4.114	0.371	27
73K8B	31	1.	-3.347	-4.069	0.722	4	-3.897	-4.265	0.368	28
73KEB	32	5.	-4.862	-4.279	-0.583	84	-1.952	-2.316	0.364	29
73KFB	33	3.	-4.669	-4.773	0.104	37	-3.856	-4.214	0.358	30
73KK8	34	5.	-4.918	-4.185	0.089	28	-3.287	-3.559	0.352	31
75938	35	6.	-5.493	-6.486	0.993	118	-4.244	-4.578	0.334	32
74BDB	36	3.	-3.958	-4.169	0.208	56	-5.167	-5.497	0.330	33
74BFB	37	4.	-3.856	-4.214	0.358	43	-3.682	-3.979	0.297	34
74B1B	38	19.	-5.836	-5.939	0.103	88	-3.469	-3.741	0.273	35
76A1B	39	4.	-5.115	-5.299	0.185	25	-2.337	-2.578	0.241	36
76GA6	40	18.	-4.189	-4.199	0.009	110	-4.583	-4.812	0.231	37
74FF8	41	26.	-3.815	-3.608	-0.208	14	-4.636	-4.853	0.217	38
74FAB	42	11.	-3.871	-2.260	-0.611	36	-3.968	-4.169	0.208	39
74FH8	43	7.	-3.682	-3.979	0.297	77	-1.632	-1.822	0.190	40
74FU8	44	27.	-3.283	-3.915	0.712	85	-3.958	-4.144	0.186	41
73CG8	46	21.	-5.173	-4.878	-0.294	39	-5.115	-5.299	0.185	42
74FC8	48	7.	-3.482	-3.273	-0.209	124	-3.457	-3.617	0.159	43
74FJ8	49	2.	-4.614	-3.827	-0.788	123	-3.958	-4.104	0.146	44
74FK8	50	5.	-5.134	-4.558	0.424	65	-3.518	-3.716	0.198	45
74FU8	51	26.	-3.149	-3.148	-0.001	33	-4.669	-4.773	0.104	46
74NA8	52	4.	-3.843	-3.657	0.814	38	-5.836	-5.939	0.103	47
74KC8	53	3.	-4.606	-4.451	-0.145	1	-4.150	-4.248	0.098	48
74CAB	54	3.	-4.812	-4.438	-0.382	48	-4.189	-4.199	0.009	49
74CHB	55	3.	-4.983	-4.670	-0.313	34	-4.918	-4.185	0.089	50
74CC8	56	4.	-5.167	-5.497	0.330	88	-6.875	-6.750	0.075	51
74FA1	57	8.	-3.503	-3.384	-0.299	82	-2.364	-2.429	0.065	52
74E8B	58	3.	-4.474	-4.400	-0.074	16	-6.419	-6.472	0.054	53
73PH8	59	3.	-4.393	-3.885	-0.507	79	-5.241	-5.281	0.040	54
73P88	60	20.	-2.989	-2.659	0.329	125	-4.148	-4.179	0.030	55
73P0B	61	30.	-2.374	-2.328	-0.046	121	-3.566	-3.590	0.024	56
73PFB	62	13.	-3.856	-3.243	-0.613	52	-3.843	-3.657	0.014	57
73PHA	63	3.	-3.188	-3.774	0.614	71	-5.353	-5.559	0.006	58
71NA8	64	2.	-3.131	-3.716	0.585	51	-3.149	-3.148	-0.001	59

710U0	65	2.	-3.618	-3.716	0.106	91	-3.169	-3.147	-0.021	60
634A0	66	1.	-3.796	-3.726	-0.070	107	-4.253	-4.220	-0.033	61
654A0	67	2.	-4.446	-4.259	-0.187	21	-4.689	-4.654	-0.035	62
634G0	68	3.	-5.151	-4.972	-0.178	29	-3.359	-3.323	-0.036	63
63AF0	70	13.	-7.122	-7.046	-0.075	61	-2.374	-2.328	-0.046	64
714BE	71	14.	-5.553	-5.559	0.006	104	-4.721	-4.673	-0.048	65
714DA	72	12.	-3.390	-3.025	-0.365	6	-6.475	-6.421	-0.054	66
730BA	73	12.	-2.914	-2.644	-0.270	66	-3.796	-3.726	-0.070	67
714CC	74	33.	-5.195	-5.582	0.386	58	-4.474	-4.499	-0.074	68
73C80	75	34.	-5.005	-5.713	0.192	70	-7.122	-7.046	-0.075	69
73CEA	76	24.	-5.378	-5.269	-0.109	122	-4.185	-4.065	-0.090	70
73CFA	77	6.	-1.632	-1.822	0.190	112	-6.228	-5.924	-0.296	71
730AA	78	13.	-3.599	-3.229	-0.370	114	-4.377	-4.277	-0.100	72
73EBA	79	12.	-5.241	-5.281	0.040	95	-3.738	-3.631	-0.107	73
73EBF	80	8.	-3.469	-3.741	0.273	76	-5.378	-5.269	-0.109	74
71CA0	81	12.	-5.876	-5.373	-0.503	26	-2.372	-2.261	-0.111	75
73EG0	82	11.	-2.364	-2.429	0.065	53	-4.606	-4.461	-0.145	76
73HC0	83	11.	-1.746	-2.231	0.484	68	-5.131	-4.972	-0.158	77
73LA0	84	6.	-1.952	-2.316	0.364	106	-3.958	-3.793	-0.165	78
77EC0	85	1.	-3.958	-4.144	0.186	75	-5.905	-5.713	-0.192	79
77EE0	86	27.	-7.235	-6.750	-0.485	10	-4.849	-4.655	-0.194	80
7708A	88	27.	-6.675	-6.750	0.075	41	-3.815	-3.598	-0.208	81
79AEA	89	11.	-2.379	-2.144	-0.235	48	-3.482	-3.273	-0.209	82
73AA0	90	2.	-3.994	-3.383	0.379	89	-2.379	-2.144	-0.235	83
638AA	91	6.	-3.169	-3.147	-0.021	15	-4.844	-4.599	-0.245	84
63CAA	92	6.	-3.487	-3.147	-0.339	93	-4.391	-4.135	-0.256	85
658AA	93	4.	-4.391	-4.135	-0.256	18	-3.811	-3.554	-0.257	86
6188A	94	3.	-3.759	-3.381	-0.379	73	-2.914	-2.644	-0.270	87
61AA0	95	3.	-3.738	-3.631	-0.107	57	-3.683	-3.394	-0.289	88
61AH0	96	3.	-3.586	-4.932	0.525	46	-5.173	-4.878	-0.294	89
61AC0	97	4.	-3.825	-4.480	0.655	117	-7.477	-7.165	-0.311	90
72AA0	98	28.	-7.451	-6.953	-0.499	55	-4.993	-4.678	-0.313	91
72AC0	99	6.	-4.594	-4.994	0.400	92	-3.487	-3.147	-0.339	92
71CA0	100	8.	-3.927	-3.423	0.376	5	-4.894	-4.547	-0.346	93
72EAA	101	18.	-3.115	-3.490	0.376	72	-3.390	-3.025	-0.365	94
728P0	103	15.	-2.651	-2.187	-0.464	78	-3.599	-3.229	-0.370	95
71JA0	104	1.	-4.721	-4.673	-0.048	94	-3.759	-3.381	-0.379	96
71LA0	105	3.	-4.002	-3.587	-0.416	54	-4.812	-4.430	-0.382	97
720N0	106	8.	-3.958	-3.793	-0.165	67	-4.446	-4.059	-0.387	98
72AC0	107	3.	-4.253	-4.220	-0.033	109	-4.441	-4.048	-0.392	99
71710	108	9.	-5.614	-6.105	0.491	127	-5.298	-4.886	-0.410	100
71310	109	8.	-3.998	-3.604	0.394	105	-4.002	-3.587	-0.416	101
72FF0	110	8.	-4.588	-4.812	0.231	19	-4.925	-4.504	-0.421	102
7298A	111	15.	-6.985	-5.389	-0.814	103	-2.651	-2.187	-0.464	103
71JCE	112	10.	-6.928	-5.924	-0.996	116	-6.658	-6.185	-0.474	104
72AE0	113	9.	-2.736	-3.288	0.472	86	-7.235	-6.750	-0.485	105
72CC0	114	2.	-4.377	-4.277	-0.100	98	-7.451	-6.953	-0.499	106
71ZB0	116	8.	-6.658	-6.185	-0.474	81	-5.876	-5.373	-0.503	107
71ZD0	117	10.	-7.477	-7.165	-0.311	56	-4.393	-3.885	-0.507	108
659AA	118	2.	-4.244	-4.578	0.334	17	-3.398	-2.887	-0.511	109
63AF0	119	5.	-3.118	-3.549	0.430	2	-4.113	-3.545	-0.569	110
63AAP	120	1.	-4.441	-4.048	-0.392	32	-4.862	-4.279	-0.583	111
63121	121	5.	-3.556	-3.598	0.024	7	-6.856	-6.135	-0.721	112
63AAA	122	7.	-4.155	-4.965	-0.890	12	-4.597	-3.866	-0.731	113
554L0	123	3.	-3.958	-4.184	0.146	9	-5.466	-4.730	-0.736	114
55AV0	124	7.	-3.457	-3.617	0.159	11	-6.266	-5.517	-0.749	115
61AA0	125	2.	-4.148	-4.179	0.030	49	-4.614	-3.827	-0.786	116
61AE0	126	3.	-4.547	-5.179	0.632	42	-3.871	-2.260	-0.811	117
62AA0	127	3.	-5.296	-4.886	-0.410	82	-3.856	-3.043	-0.813	118
64211	128	14.	-6.128	-6.701	0.573	111	-6.283	-5.389	-0.894	119


O&M MODEL RUN4
DEP VAR 11 LHHUNS
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID


O&M MODEL RUN4
DEP VAR IS LMHUNS
RESIDUAL VS. FITTED Y
=7.165
=4.493
=1.822
POSITIVE
RESIDUALS
0
NEGATIVE
=7.165
=4.493
=1.822
FITTED Y

CP VALUES FOR THE SELECTION OF VARIABLES

O&M MODEL RUN4 DEP VAR 11 LMHUNS SEARCH NUMBER 1

SELECTION OF VARIABLES FOR BASIC EQUATION

CP =442.9, VARIABLE ADDED 16 LUP

CP =413.6, VARIABLE ADDED 8 MEM

CP =334.2, VARIABLE ADDED 3 BOMNAV

CP =284.9, VARIABLE ADDED 6 SS

CP =159.8, VARIABLE ADDED 5 DI

CP =129.1, VARIABLE ADDED 7 MCC

CP = 66.8, VARIABLE ADDED 17 LWT

CP = 63.2, VARIABLE ADDED 15 DUF

CP = 63.9, VARIABLE ADDED 18 LPD

NUMBER OF OBSERVATIONS 119
NUMBER OF VARIABLES IN FULL EQUATION 18
NUMBER OF VARIABLES IN BASIC EQUATION 7
REMAINDER OF VARIABLES TO BE SEARCHED 11

EQUATION	P	CP	VARIABLES IN EQUATION															
	19	19.0	FULL EQUATION															
	8	66.8	BASIC SET OF VARIABLES	3 BOMNAV	5 DI	6 SS	7 MCC	8 MEM	16 LUP	17 LWT								
			RMS = 0.29663															
1	17	28.3	BASIC SET PLUS	1 FIGSEN	4 BOMCOM	9 MPD	11 DCC	12 DCD	13 DEM	14 DPD	15 DUF	18 LPD						
			RMS = 0.28813															
2	18	19.3	BASIC SET PLUS	1 FIGSEN	2 FIGCOM	4 BOMCOM	9 MPD	11 DCC	12 DCD	13 DEM	14 DPD	15 DUF	18 LPD					
			RMS = 0.19838															
3	19	19.0	BASIC SET PLUS	1 FIGSEN	2 FIGCOM	4 BOMCOM	9 MPD	10 DVO	11 DCC	12 DCD	13 DEM	14 DPD	15 DUF	18 LPD				
			RMS = 0.19387															
4	18	28.8	BASIC SET PLUS	1 FIGSEN	4 BOMCOM	9 MPD	10 DVO	11 DCC	12 DCD	13 DEM	14 DPD	15 DUF	18 LPD					
			RMS = 0.19760															
5	17	28.9	BASIC SET PLUS	1 FIGSEN	2 FIGCOM	4 BOMCOM	9 MPD	11 DCC	12 DCD	14 DPD	15 DUF	18 LPD						
			RMS = 0.28128															

SWEEP NUMBER 2847, DELTA Z(K,K) = 7.D-15

ESTIMATE OF VARIANCE

NO SMALLER RMS VALUE FOUND IN SUBSET EQUATIONS

RMS OF FULL EQUATION SELECTED BY USER TO CALCULATE CP VALUES

SEQ	EQUATION	P	ORDERED CP
1	3	19	19.0
2	2	18	19.3
3	4	18	20.2
4	1	17	29.3
5	5	17	20.9

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN5 DEP VAR 1: LMHSHO MIN Y = -9,8810 00 MAX Y = -8,2720-01 RANGE Y = 8,2840 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPOS" MODEL
LMHSHO = B(0) + B(1)FIGCOM + B(2)BOMNAV + B(3)BOMCOM + B(4)DI
+ B(5)PS + B(6)SS + B(7)MCO + B(8)MEM + B(9)DUP
+ B(10)DCO + B(11)DEM + B(12)DUF + B(13)LUP + B(14)LVO
LMHSHO = LN(MMHSHO)
MMHSHO = SHOP MAINTENANCE MANHOURS PER OPERATING HOUR

IND.VAR(I)	NAME	COEF.B(I)	S.E. COEF.	T-VALUE	R(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL.INF.X(I)
0		-1,145290 01							
1	FIGCOM	8,429910-01	2,420-01	3,5	0,2931	0,0	1,0000 00	1,0000 00	0,10
2	BOMNAV	4,102110-01	1,750-01	2,3	0,2238	0,0	1,0000 00	1,0000 00	0,05
3	BOMCOM	9,395390-01	2,030-01	4,6	0,1202	0,0	1,0000 00	1,0000 00	0,11
4	DI	-1,743970-02	1,780-03	9,9	0,4452	0,0	1,0000 02	1,0000 02	0,21
5	PS	-5,478810-03	2,860-03	1,9	0,0687	0,0	1,0000 02	1,0000 02	0,07
6	SS	-1,908860-02	2,430-03	7,8	0,5615	0,0	1,0000 02	1,0000 02	0,23
7	MCO	3,139220-01	5,160-02	6,1	0,3607	-1,2150 00	5,4540 00	6,6690 00	0,25
8	MEM	-3,237930-02	3,250-03	10,0	0,5865	-1,0220 01	8,0820 01	1,0900 02	0,39
9	DUP	7,343870-12	3,790-12	1,9	0,1985	2,2260 07	1,4360 11	1,4360 11	0,13
10	DCO	-5,6841R0-02	2,590-02	2,2	0,3135	1,7840-04	1,8610 01	1,8610 01	0,13
11	DEM	-3,761690-04	9,640-05	3,9	0,0367	2,7840 01	3,8470 03	3,8260 03	0,14
12	DUF	2,439150-01	1,780-0?	1,4	0,0988	2,0250-01	2,1030 00	1,0800 00	0,06
13	LUP	8,788290-01	5,680-02	12,8	0,7074	5,0300 00	1,3250 01	8,2170 00	0,67
14	LVO	5,657860-01	6,600-02	8,5	0,5871	3,4810 00	9,0120 00	5,6110 00	0,38

NO. OF OBSERVATIONS	119
NO. OF IND. VARIABLES	14
RESIDUAL DEGREES OF FREEDOM	104
F-VALUE	66,6
RESIDUAL ROOT MEAN SQUARE	0,54929995
RESIDUAL MEAN SQUARE	0,30173843
RESIDUAL SUM OF SQUARES	31,37996468
TOTAL SUM OF SQUARES	312,7884?837
MULT. CORREL. COEF. SQUARED	,8997

REQUIRED X(I) PRECISION
(DIGIT RIGHT OF DECIMAL POSITIVE,
LEFT OF DECIMAL NEGATIVE)

IND.VAR(I)	DIGIT
1	-1
2	-1
3	-1
4	-2
5	-2
6	-2
7	1
8	-2
9	-11
10	-1
11	-4
12	1
13	1
14	1

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUNS DEP VAR IS LMMSMO RESIDUAL ROOT MEAN SQUARE OF FITTED EQUATION: 0.55

STANDARD DEVIATION ESTIMATED FROM RESIDUALS OF NEIGHBORING OBSERVATIONS (OBSERVATIONS 1 TO 4 APART IN FITTED Y ORDER).

NO.	CUMULATIVE STD DEV	ORDERED BY MSSO MSSO	OBSV.	OBSV.	DEL RESIDUALS	ORDERED BY FITTED Y MSSO	DEL RESIDUALS	FITTED Y	OBSV.	SEQ.
1	0.19	0.0	92	91	0.28	0.0	0.59	-6.31	88	1
2	0.28	0.0	65	64	0.42	52.77	1.62	-6.31	88	2
3	0.37	0.0	88	88	0.59	13.85	0.87	-7.10	58	3
4	0.33	0.04	199	188	0.23	51.14	1.10	-7.22	6	4
5	0.33	0.05	16	35	0.33	53.55	0.28	-7.08	76	5
6	0.47	0.10	61	42	1.23	0.00	0.22	-6.88	117	6
7	0.41	0.23	124	186	0.85	5.54	0.28	-6.69	128	7
8	0.43	0.24	6	128	0.50	67.63	0.73	-6.43	98	8
9	0.39	0.26	58	53	0.05	64.46	0.56	-6.42	38	9
10	0.36	0.26	13	14	0.17	37.89	1.38	-5.18	79	10
11	0.34	0.30	4	85	0.80	24.32	0.37	-5.98	75	11
12	0.45	0.31	56	13	1.75	0.59	0.56	-5.66	7	12
13	0.43	0.31	120	37	0.23	7.28	0.79	-5.84	16	13
14	0.49	0.32	19	54	1.41	7.37	1.58	-5.82	116	14
15	0.52	0.48	114	58	1.81	2.57	0.56	-5.77	108	15
16	0.56	0.48	2	119	1.48	25.92	0.57	-5.63	35	16
17	0.60	0.53	7	35	0.88	36.13	1.38	-5.49	74	17
18	0.64	0.54	17	62	1.42	37.84	0.32	-5.84	112	18
19	0.61	0.55	85	129	0.88	1.86	0.58	-5.43	79	19
20	0.60	0.55	54	114	0.56	24.84	1.12	-5.36	71	20
21	0.62	0.55	121	2	0.98	38.38	0.18	-5.22	111	21
22	0.62	0.59	7	16	0.56	13.75	0.33	-5.24	11	22
23	0.59	0.67	65	66	0.93	18.21	0.73	-4.98	56	23
24	0.58	0.67	64	68	0.43	15.48	1.48	-4.93	81	24
25	0.57	0.70	59	32	0.21	3.56	1.38	-4.84	13	25
26	0.58	0.70	8	117	0.82	51.59	0.32	-4.80	29	26
27	0.58	0.79	123	114	0.81	57.58	0.51	-4.80	46	27
28	0.57	0.80	117	126	0.92	2.26	1.42	-4.78	55	28
29	0.56	0.87	119	109	0.35	32.83	0.94	-4.72	14	29
30	0.54	0.91	19	123	0.91	49.89	0.49	-4.71	10	30
31	0.53	0.99	37	12	0.22	25.93	0.52	-4.61	122	31
32	0.53	1.03	71	81	0.67	18.26	1.44	-4.60	110	32
33	0.54	1.06	79	71	0.58	8.14	0.58	-4.56	71	33
34	0.56	1.09	7	100	1.45	18.27	1.02	-4.50	39	34
35	0.59	1.18	14	21	2.25	8.12	0.51	-4.47	9	35
36	0.62	1.32	15	49	1.17	16.84	1.07	-4.46	15	36
37	0.61	1.45	129	107	0.36	15.28	0.10	-4.34	33	37
38	0.62	1.50	108	79	0.87	15.88	0.15	-4.28	48	38
39	0.64	1.53	13	55	1.59	16.39	0.37	-4.25	127	39
40	0.64	1.54	58	30	0.78	7.99	0.12	-4.22	19	40
41	0.63	1.60	59	12	0.88	6.11	1.29	-4.22	68	41
42	0.64	1.61	82	17	1.38	1.71	1.48	-4.10	54	42
43	0.64	1.67	39	33	0.47	19.57	0.27	-4.16	123	43
44	0.62	1.70	33	127	0.85	12.48	0.13	-4.13	126	44
45	0.64	1.71	54	123	1.48	17.89	0.67	-4.05	5	45
46	0.63	1.78	12	36	0.12	17.19	0.03	-4.05	114	46
47	0.62	1.91	35	79	0.31	16.48	0.44	-4.02	99	47
48	0.62	1.92	103	25	0.54	15.44	0.35	-4.02	118	48
49	0.61	1.94	107	37	0.13	1.54	0.78	-3.86	58	49
50	0.61	1.95	11	81	0.58	2.26	0.65	-3.71	30	50
51	0.61	2.00	15	10	0.65	11.92	0.13	-3.84	53	51
52	0.61	2.02	125	1	0.65	3.77	0.23	-3.83	104	52
53	0.60	2.06	52	18	0.42	14.94	0.48	-3.80	125	53
54	0.61	2.13	40	54	0.88	34.65	1.39	-3.78	34	54

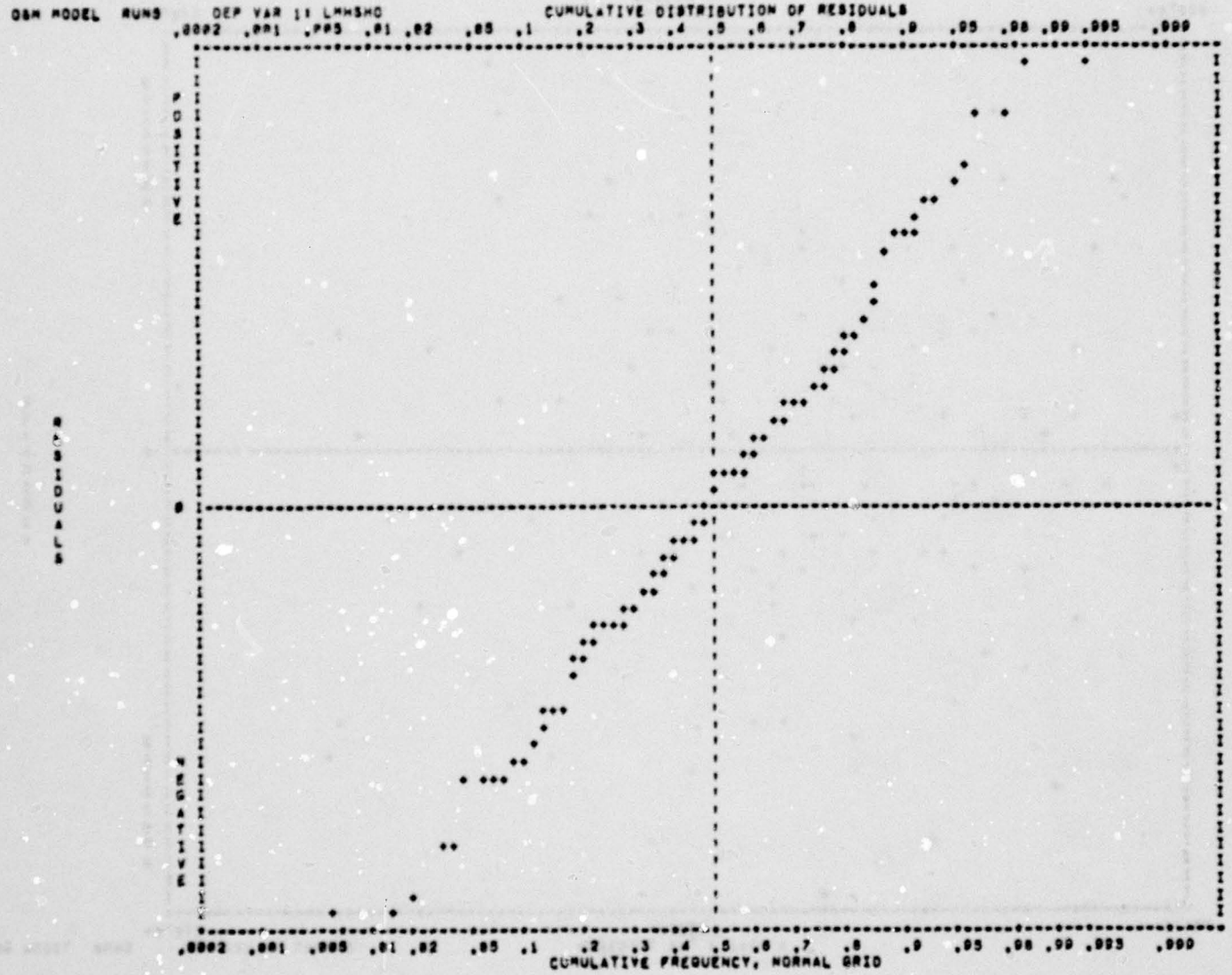


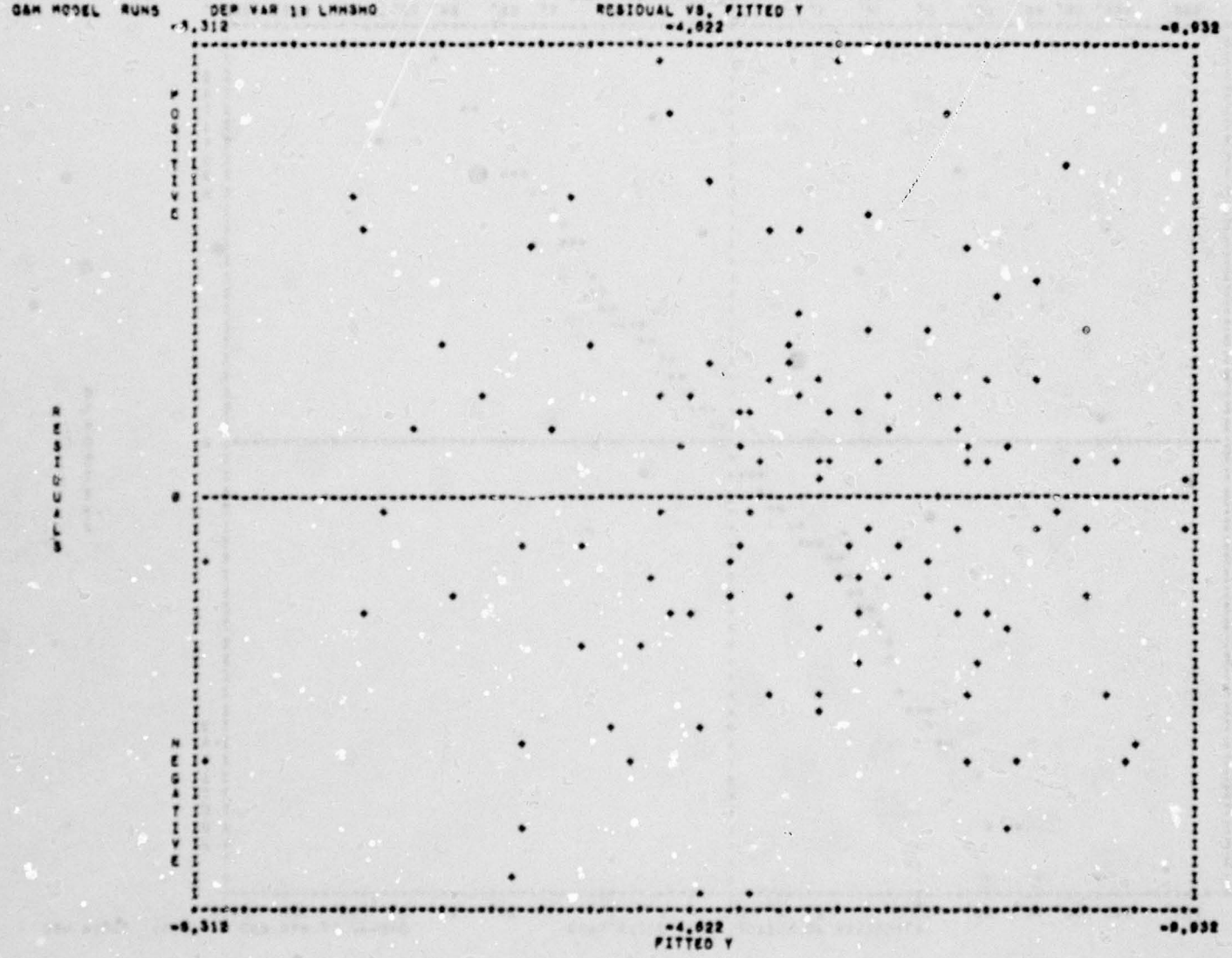
LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUNS DEP VAR IS LOWSHO

ORDERED BY COMPUTER INPUT						ORDERED BY RESIDUALS				
IDENT.	OBSV.	NSB DISTANCE	OBS. Y	FITTED Y	RESIDUAL	OBSV.	OBS. Y	FITTED Y	ORDERED RESID.	SEQ
71A2A	1	2.	-4.929	-3.656	-0.372	13	-3.572	-4.835	1.264	1
71L5A	2	6.	-3.357	-2.968	-0.789	44	-2.286	-3.515	1.229	2
71M6A	3	23.	-3.357	-3.339	0.232	17	-1.574	-2.671	1.097	3
71PAA	4	2.	-3.542	-3.651	0.110	14	-3.628	-4.724	1.096	4
71P9A	5	6.	-3.979	-4.863	0.884	84	-0.827	-1.791	0.963	5
71T1A	6	16.	-8.246	-7.916	0.778	15	-3.572	-4.458	0.885	6
724GA	7	9.	-8.598	-9.579	-0.719	74	-4.646	-5.498	0.844	7
71FAA	8	5.	-4.193	-4.474	0.371	58	-6.262	-7.098	0.836	8
71P8A	10	16.	-4.549	-4.718	0.161	99	-2.487	-3.317	0.830	9
71C4A	11	5.	-5.817	-5.035	-0.782	118	-3.217	-3.997	0.780	10
71DAA	12	3.	-3.681	-3.334	-0.347	6	-6.246	-7.018	0.772	11
51EAA	13	5.	-3.572	-4.835	1.264	34	-3.044	-3.782	0.738	12
52AAC	14	8.	-3.628	-4.724	1.096	108	-5.834	-6.561	0.727	13
52A8A	15	9.	-3.572	-4.458	0.885	119	-1.852	-2.547	0.696	14
838DA	16	19.	-6.884	-5.844	-0.159	25	-1.484	-2.178	0.694	15
71AEA	17	17.	-1.574	-2.671	1.097	148	-1.743	-2.318	0.575	16
74JAA	18	9.	-2.724	-2.397	-0.327	104	-3.322	-3.827	0.505	17
74JCA	19	7.	-3.981	-4.229	0.239	98	-2.383	-2.856	0.492	18
52SA1	20	3.	-4.837	-4.891	0.054	28	-2.821	-3.298	0.485	19
71ZA8	21	5.	-5.709	-4.557	-1.151	81	-1.173	-1.648	0.476	20
73EGA	24	11.	-3.139	-3.368	0.229	71	-4.911	-5.355	0.445	21
73EPA	25	19.	-1.484	-2.108	0.624	98	-5.985	-6.428	0.443	22
73H4A	26	19.	-1.925	-0.932	-0.993	58	-3.453	-3.882	0.428	23
73HCA	27	18.	-2.813	-2.231	-0.383	53	-3.461	-3.838	0.378	24
73N4A	28	28.	-2.821	-3.306	0.485	9	-4.103	-4.474	0.371	25
73G9A	29	9.	-2.468	-2.563	0.095	109	-2.884	-2.433	0.349	26
735CA	30	11.	-4.135	-3.860	-0.275	99	-3.473	-4.017	0.344	27
73K9A	31	4.	-2.889	-3.163	0.273	72	-1.738	-2.048	0.310	28
73KEA	32	6.	-3.804	-3.333	-0.471	88	-3.301	-3.618	0.317	29
73KFA	33	3.	-4.531	-4.344	-0.186	64	-2.317	-2.622	0.305	30
73KKA	34	11.	-3.044	-3.782	0.738	79	-5.886	-6.177	0.291	31
75933	35	9.	-5.469	-5.631	0.171	110	-4.311	-4.598	0.287	32
748DA	36	8.	-3.129	-3.228	0.198	46	-4.314	-4.799	0.285	33
74RFA	37	2.	-3.573	-3.446	-0.128	129	-3.522	-3.799	0.276	34
74R1A	38	38.	-6.687	-6.398	-0.289	31	-2.889	-3.163	0.273	35
70A1A	39	5.	-5.158	-4.504	-0.654	63	-2.598	-2.774	0.265	36
76GAA	40	8.	-4.565	-4.261	-0.303	19	-3.981	-4.228	0.239	37
74FFA	41	22.	-3.195	-2.233	-0.962	3	-3.357	-3.589	0.232	38
74FAA	42	16.	-2.185	-1.349	-0.836	103	-3.933	-4.165	0.232	39
74FMA	43	6.	-2.958	-3.131	0.172	24	-3.139	-3.368	0.229	40
74FUA	44	69.	-2.288	-3.515	1.229	121	-2.491	-2.589	0.188	41
73CGA	45	48.	-4.514	-4.799	0.285	43	-2.958	-3.131	0.172	42
74FCA	48	18.	-2.183	-2.868	0.686	35	-5.459	-5.631	0.171	43
74FJA	49	3.	-3.137	-2.574	-0.563	129	-6.521	-6.686	0.165	44
74FKA	50	18.	-6.262	-7.098	0.836	10	-4.549	-4.719	0.161	45
74FQA	51	19.	-2.417	-2.539	0.122	101	-2.181	-2.231	0.138	46
74K4A	52	7.	-0.318	-2.415	0.097	51	-2.417	-2.539	0.122	47
74KCA	53	7.	-3.451	-3.838	0.378	68	-4.099	-4.219	0.120	48
74CAA	54	5.	-5.345	-4.178	-1.167	37	-3.532	-3.644	0.112	49
74CBA	55	8.	-5.182	-4.777	-0.328	4	-3.542	-3.651	0.110	50
74CCA	56	7.	-5.432	-4.996	-0.455	89	-1.619	-1.727	0.108	51
74FA1	57	9.	-3.532	-3.804	0.112	128	-3.451	-3.552	0.101	52
74EBA	58	8.	-3.453	-3.882	0.428	36	-3.129	-3.228	0.100	53
73PHA	59	4.	-3.648	-3.981	0.333	77	-1.345	-1.444	0.099	54
73PRA	60	31.	-8.938	-8.966	0.028	52	-2.318	-2.415	0.097	55
73PDA	61	14.	-1.173	-1.648	0.476	5	-3.979	-4.083	0.094	56
73PFA	62	21.	-2.948	-2.618	-0.321	29	-2.488	-2.583	0.075	57
73PHA	63	4.	-2.599	-2.774	0.265	69	-8.938	-8.966	0.028	58
71N4A	64	4.	-2.317	-2.622	0.305	85	-3.682	-3.623	0.021	59

71GU8	65	4.	-2.718	-2.822	-0.094	95	-2.732	-2.750	0.018	60
63AA8	66	4.	-2.788	-2.588	-0.121	28	-4.837	-4.891	-0.036	61
65AA8	67	5.	-2.955	-2.453	-0.502	126	-4.172	-4.130	-0.042	62
63AG8	68	5.	-4.999	-4.219	0.120	117	-6.927	-6.876	-0.050	63
63HF8	70	16.	-5.886	-6.177	0.291	63	-1.925	-1.853	-0.071	64
71A8E	71	11.	-4.911	-5.355	0.445	26	-1.825	-0.932	-0.893	65
71ADA	72	13.	-1.730	-2.048	0.318	65	-2.718	-2.822	-0.094	66
73D8A	73	11.	-2.106	-1.535	-0.572	48	-2.163	-2.068	-0.096	67
71ACC	74	43.	-4.848	-5.499	0.844	113	-3.368	-3.252	-0.115	68
73C8Q	75	48.	-6.987	-5.988	-1.087	91	-1.798	-1.673	-0.117	69
73CEN	76	42.	-7.333	-7.002	-0.331	66	-2.788	-2.588	-0.121	70
73CPK	77	8.	-1.345	-1.444	0.099	37	-3.573	-3.446	-0.126	71
73DAH	78	21.	-3.812	-2.851	-0.361	127	-4.382	-4.248	-0.134	72
73E9A	79	12.	-5.571	-5.433	-0.138	79	-5.571	-5.433	-0.138	73
73E9P	80	8.	-3.381	-3.618	0.317	93	-3.223	-3.082	-0.141	74
71CA8	81	8.	-5.149	-4.927	-0.221	16	-6.884	-5.844	-0.159	75
73EG8	82	13.	-3.833	-2.829	-0.285	33	-4.531	-4.144	-0.186	76
73HC#	83	11.	-1.925	-1.853	-0.071	88	-8.503	-8.312	-0.192	77
73LA8	84	4.	-0.827	-1.791	0.963	82	-3.833	-2.829	-0.285	78
77EC8	85	2.	-3.682	-3.673	0.021	01	-5.149	-4.927	-0.221	79
77EE8	86	50.	-9.891	-8.312	-0.788	105	-3.384	-3.159	-0.225	80
77D98	88	50.	-8.503	-8.312	-0.192	107	-3.793	-3.535	-0.259	81
78AEA	89	6.	-1.819	-1.727	0.106	59	-3.546	-3.381	-0.265	82
73KA8	90	7.	-2.363	-2.856	0.492	38	-4.135	-3.868	-0.275	83
63AAA	91	10.	-1.798	-1.673	-0.117	97	-3.124	-2.844	-0.280	84
63CAA	92	10.	-1.987	-1.673	-0.314	48	-4.565	-4.281	-0.283	85
65BAA	93	7.	-3.223	-3.082	-0.141	36	-6.687	-6.398	-0.289	86
61B8A	94	5.	-2.999	-2.287	-0.783	92	-1.987	-1.673	-0.314	87
61AA8	95	8.	-2.732	-2.750	0.018	82	-2.948	-2.618	-0.321	88
61AR8	96	7.	-2.687	-3.317	0.630	55	-5.182	-4.777	-0.325	89
61AC8	97	9.	-3.124	-2.844	-0.280	18	-2.724	-2.397	-0.327	90
72AA8	98	28.	-5.985	-6.428	0.443	76	-7.333	-7.002	-0.331	91
72AC8	99	18.	-3.673	-4.017	0.344	122	-4.941	-4.608	-0.333	92
71CA8	100	12.	-1.743	-2.318	0.575	12	-3.681	-3.334	-0.347	93
72EAA	101	12.	-2.181	-2.231	0.130	78	-3.812	-2.851	-0.361	94
72BP0	103	16.	-2.993	-1.278	-0.734	1	-4.829	-3.858	-0.372	95
71JA8	104	3.	-3.322	-3.827	0.505	27	-2.613	-2.231	-0.383	96
71LA8	105	4.	-3.384	-3.159	-0.225	86	-5.432	-4.976	-0.455	97
72D98	106	12.	-4.244	-3.628	-0.615	112	-5.988	-5.442	-0.458	98
72AC8	107	2.	-3.793	-3.535	-0.259	32	-3.804	-3.333	-0.471	99
71716	108	10.	-5.834	-5.761	0.727	67	-2.955	-2.453	-0.502	100
71310	109	13.	-2.784	-2.433	0.349	49	-3.137	-2.574	-0.563	101
72PP8	110	12.	-4.311	-4.598	0.287	124	-4.237	-3.671	-0.566	102
72P98	111	28.	-5.899	-5.219	-0.680	73	-2.106	-1.535	-0.572	103
71JCE	112	14.	-5.930	-5.442	-0.458	114	-4.628	-4.045	-0.583	104
72AEP	113	14.	-3.358	-3.243	-0.115	106	-4.244	-3.628	-0.615	105
72CC8	114	4.	-4.628	-4.045	-0.583	39	-5.158	-4.504	-0.654	106
71Z98	116	14.	-6.765	-5.816	-0.948	111	-5.899	-5.219	-0.680	107
71Z08	117	21.	-6.927	-6.876	-0.050	7	-6.598	-5.879	-0.719	108
65AAA	118	4.	-3.217	-3.997	0.780	103	-2.823	-1.278	-0.734	109
63AF8	119	7.	-1.852	-2.547	0.696	42	-2.105	-1.349	-0.756	110
63AAP	120	2.	-3.451	-3.552	0.101	86	-9.891	-8.312	-0.788	111
83121	121	6.	-2.481	-2.589	0.108	11	-5.817	-5.035	-0.782	112
63AAA	122	10.	-4.941	-4.608	-0.333	94	-2.998	-2.207	-0.783	113
55ALP	123	8.	-3.933	-4.165	0.232	2	-3.357	-2.568	-0.789	114
55AV8	124	11.	-4.237	-3.671	-0.566	116	-6.765	-5.816	-0.948	115
61AA8	125	3.	-3.322	-3.799	0.276	41	-3.195	-2.233	-0.962	116
61AE8	126	7.	-4.172	-4.130	-0.042	75	-6.987	-5.988	-1.087	117
62AA8	127	5.	-4.382	-4.248	-0.134	21	-8.789	-4.557	-1.151	118
64211	128	16.	-9.821	-8.663	0.165	84	-5.345	-4.178	-1.167	119


O&M MODEL RUNS
DEP VAR IS LMHSHO
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
RESIDUALS
0
NEGATIVE
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID


G&M MODEL RUNS
DEP VAR IS LMMSHO
RESIDUAL VS. FITTED Y
-5.312
-4.622
-3.932
RESIDUAL
0
-5.312
-4.622
-3.932
FITTED Y

CP VALUES FOR THE SELECTION OF VARIABLES

O&M MODEL RUN5 DEP VAR 11 LMM3MO SEARCH NUMBER 1

SELECTION OF VARIABLES FOR BASIC EQUATION

CP =548.9, VARIABLE ADDED 13 LUP

CP =459.8, VARIABLE ADDED 8 MEM

CP =294.9, VARIABLE ADDED 4 DI

CP =158.9, VARIABLE ADDED 14 LVD

CP = 99.9, VARIABLE ADDED 6 SS

CP = 71.7, VARIABLE ADDED 7 MCD

CP = 54.5, VARIABLE ADDED 3 BOMCOM

CP = 48.4, VARIABLE ADDED 11 DEM

CP = 26.9, VARIABLE ADDED 1 FIGCOM

CP = 22.3, VARIABLE ADDED 2 BOMNAV

CP = 19.1, VARIABLE ADDED 10 DCD

CP = 17.8, VARIABLE ADDED 9 DUP

CP = 15.8, VARIABLE ADDED 5 PS

CP = 15.8, VARIABLE ADDED 12 DUP

NUMBER OF OBSERVATIONS	119
NUMBER OF VARIABLES IN FULL EQUATION	14
NUMBER OF VARIABLES IN BASIC EQUATION	12
REMAINDER OF VARIABLES TO BE SEARCHED	2

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EQUATION  P   CP     VARIABLES IN EQUATION

          15  15,0   FULL EQUATION

          13  15,0   BASIC SET OF VARIABLES      1       2       3      4      6      7      8      9      10      11
                                                FIGCOM  BOMNAV  BOMCOM  DI     SS     MCD    MEM    OUP    OCD     OEM

                          13      14
                     LUP      LVO
                     RMS =    0,38755

      1   14  15,0   BASIC SET PLUS        5
                                  PS
                     RMS =    0,38474

      2   15  15,0   BASIC SET PLUS        5      12
                                  PS      OUP
                     RMS =    0,38173

      3   14  16,7   BASIC SET PLUS      12
                                 OUP
                     RMS =    0,38939

SWEEP NUMBER          3,  DELTA Z(K,K) =  0,

ESTIMATE OF VARIANCE

NO SMALLER RMS VALUE FOUND IN SUBSET EQUATIONS

RMS OF FULL EQUATION SELECTED BY USER TO CALCULATE CP VALUES


 SEQ  EQUATION  P  ORDERED CP
   1        2  15      15,0
   2        1  14      15,9
   3        3  14      16,7
```

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN6 DEP VAR 1: LLSCTO MIN Y = -4.5290 00 MAX Y = 3.2820 00 RANGE Y = 7.8110 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPOS" MODEL

LLSCTO = B(0) + B(1)FIGCOM + B(2)BOMNAV + B(3)BOMCOM + B(4)CO
+ B(5)DI + B(6)EM + B(7)XT + B(8)SS + B(9)MVO + B(10)MWT
+ B(11)DVO + B(12)DWT + B(13)DCC + B(14)DPS + B(15)DUF
+ B(16)LUP + B(17)LVO + B(18)LPO

LLSCTO = LN(LSCTOT)

LSCTOT = TOTAL LOGISTICS SUPPORT COST PER OPERATING HOUR

IND,VAR(I)	NAME	COEF,B(I)	S.E. COEF.	T-VALUE	R(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL.IMP.X(I)
0		-7.979580 00							
1	FIGCOM	7.851430-01	2.470-01	3.2	0.1364	0.0	1.0000 00	1.0000 00	0.10
2	BOMNAV	1.148760 00	1.950-01	5.9	0.2571	0.0	1.0000 00	1.0000 00	0.15
3	BOMCOM	1.077190 00	2.350-01	4.6	0.1881	0.0	1.0000 00	1.0000 00	0.14
4	CO	1.915000-01	5.450-02	3.5	0.3664	4.9230-03	6.6740 00	6.6690 00	0.16
5	DI	-1.220770-02	2.810-03	6.1	0.4625	0.0	1.0000 02	1.0000 02	0.16
6	EM	-1.723370-02	3.490-03	4.9	0.5456	0.0	1.0000 02	1.0000 02	0.22
7	XT	-9.493290-03	4.270-03	2.2	0.5872	0.0	1.0000 02	1.0000 02	0.12
8	SS	-8.361540-03	2.730-03	3.1	0.6848	0.0	1.0000 02	1.0000 02	0.11
9	MVO	-3.358350-04	1.110-04	3.0	0.8923	-1.3830 03	6.8870 03	8.1700 03	0.35
10	MWT	1.986410-02	4.760-03	4.2	0.8682	-3.1300 01	1.4140 02	1.7270 02	0.44
11	DVO	8.705930-08	2.740-08	2.5	0.7521	1.9360 03	2.4780 07	2.4760 07	0.21
12	DWT	-1.853570-04	5.370-05	2.8	0.6581	3.6860 00	1.1750 04	1.1750 04	0.16
13	DCC	-4.249910-08	1.610-08	2.4	0.3741	1.6800 01	2.8230 07	2.8230 07	0.15
14	DPS	-4.385250-04	1.410-04	3.1	0.2346	3.4190 01	2.9720 03	2.9340 03	0.16
15	DUF	7.799840-01	1.980-01	4.1	0.1741	1.7640-01	2.9160 00	1.8480 00	0.18
16	LUP	5.841310-01	5.830-02	9.7	0.6692	5.8380 00	1.3250 01	8.2170 00	0.59
17	LVO	4.819020-01	1.610-01	2.9	0.9197	3.4910 00	5.8120 00	5.8110 00	0.33
18	LPO	1.472640-01	5.880-02	2.5	0.6143	1.0990 00	8.8860 00	6.9880 00	0.13

NO. OF OBSERVATIONS	117
NO. OF IND. VARIABLES	18
RESIDUAL DEGREES OF FREEDOM	98
F-VALUE	41.9
RESIDUAL ROOT MEAN SQUARE	8.58888622
RESIDUAL MEAN SQUARE	8.34678698
RESIDUAL SUM OF SQUARES	33.99512414
TOTAL SUM OF SQUARES	289.77553424
MULT. CORREL. COEF. SQUARED	.8827

REQUIRED X(I) PRECISION
(DIGIT RIGHT OF DECIMAL POSITIVE,
LEFT OF DECIMAL NEGATIVE)

IND,VAR(I)	DIGIT
1	-1
2	-1
3	-1
4	1
5	-2
6	-2
7	-2
8	-2
9	-4
10	-2
11	-7
12	-4
13	-7
14	-4
15	1
16	1
17	1
18	1

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN8 DEP VAR 1: LLSCTO RESIDUAL ROOT MEAN SQUARE OF FITTED EQUATION: 0.59

STANDARD DEVIATION ESTIMATED FROM RESIDUALS OF NEIGHBORING OBSERVATIONS (OBSERVATIONS 1 TO 4 APART IN FITTED Y ORDER).

NO.	CUMULATIVE STD DEV	ORDERED BY WSSO OWSO	OBSV.	OBSV.	DEL RESIDUALS	WSSO	DEL RESIDUALS	ORDERED BY FITTED Y FITTED Y	OBSV.	SEQ.
1	0.21	0.0	92	91	0.21	11.77	0.38	-3.78	88	1
2	0.31	0.0	65	64	0.42	0.01	1.76	-3.66	117	2
3	0.44	0.01	121	119	0.72	0.22	0.13	-3.61	23	3
4	0.39	0.01	118	22	0.28	6.45	0.28	-3.48	59	4
5	0.65	0.01	117	23	1.76	0.22	0.93	-3.37	128	5
6	0.62	0.13	14	13	0.44	4.22	0.51	-3.37	6	6
7	0.53	0.22	128	6	0.93	12.51	0.29	-3.07	98	7
8	0.49	0.22	127	39	0.23	28.78	0.66	-2.85	112	8
9	0.48	0.29	53	58	0.35	14.82	0.63	-2.71	75	9
10	0.47	0.34	23	8	0.43	5.76	0.82	-2.57	35	10
11	0.54	0.34	117	6	1.33	7.84	1.22	-2.57	78	11
12	0.59	0.35	119	109	1.87	0.84	1.35	-2.52	108	12
13	0.64	0.41	117	128	1.35	2.81	0.89	-2.51	7	13
14	0.62	0.41	23	129	0.41	0.01	0.26	-2.47	116	14
15	0.63	0.44	71	81	0.74	13.36	2.88	-2.42	22	15
16	0.61	0.48	49	83	0.32	16.59	1.48	-2.39	74	16
17	0.58	0.51	113	24	0.11	2.15	0.98	-2.20	111	17
18	0.56	0.64	71	79	0.27	12.88	1.11	-1.95	38	18
19	0.57	0.68	85	129	0.72	15.87	1.48	-1.83	11	19
20	0.59	0.86	35	7	0.94	18.44	0.79	-1.77	76	20
21	0.59	0.88	26	103	0.73	0.54	0.27	-1.75	71	21
22	0.59	0.88	59	87	0.45	15.72	0.82	-1.58	79	22
23	0.56	0.77	14	15	0.01	11.46	0.88	-1.48	56	23
24	0.56	0.78	79	81	0.47	7.03	1.13	-1.33	119	24
25	0.59	0.84	108	7	1.35	11.58	1.26	-1.28	81	25
26	0.58	0.95	13	15	0.43	5.88	0.22	-1.16	99	26
27	0.61	1.03	55	114	1.43	2.72	0.51	-1.13	128	27
28	0.60	1.15	21	13	0.38	3.68	0.27	-1.07	127	28
29	0.61	1.18	114	19	0.83	4.25	0.94	-0.98	21	29
30	0.61	1.23	21	14	0.82	6.93	0.88	-0.98	39	30
31	0.62	1.32	118	5	0.74	4.82	0.89	-0.91	14	31
32	0.60	1.33	128	2	0.96	5.48	0.45	-0.86	122	32
33	0.58	1.36	38	85	0.84	0.85	0.43	-0.85	13	33
34	0.58	1.36	63	105	0.56	11.38	0.21	-0.82	15	34
35	0.60	1.39	4	33	1.32	6.78	0.57	-0.81	118	35
36	0.60	1.39	128	12	0.52	7.91	0.18	-0.79	68	36
37	0.58	1.43	59	107	0.95	15.97	0.96	-0.77	5	37
38	0.59	1.49	31	4	0.25	15.95	1.94	-0.76	46	38
39	0.59	1.59	33	1	0.85	5.96	0.38	-0.74	9	39
40	0.57	1.60	48	29	0.15	18.78	1.38	-0.72	28	40
41	0.56	1.64	35	108	0.41	8.64	0.79	-0.63	55	41
42	0.55	1.68	6	35	0.25	2.24	0.58	-0.52	104	42
43	0.55	1.73	87	107	0.58	5.96	0.49	-0.50	125	43
44	0.55	1.82	1	32	0.54	4.58	0.38	-0.51	31	44
45	0.55	1.96	36	126	0.66	13.88	0.94	-0.51	114	45
46	0.56	1.97	49	105	0.88	15.14	0.88	-0.51	89	46
47	0.55	2.04	105	123	0.97	5.88	0.65	-0.51	19	47
48	0.56	2.15	111	38	0.96	1.39	1.32	-0.46	4	48
49	0.55	2.24	104	125	0.58	1.59	0.85	-0.45	33	49
50	0.56	2.42	110	127	0.61	5.84	0.52	-0.43	1	50
51	0.57	2.48	82	83	1.13	18.26	0.85	-0.29	34	51
52	0.57	2.49	63	123	0.49	3.88	1.41	-0.29	53	52
53	0.57	2.51	107	98	1.93	4.97	0.99	-0.18	32	53
54	0.58	2.52	3	49	1.98	1.36	0.84	-0.16	36	54
55	0.59	2.65	9	125	0.37	5.71	0.37	-0.13	85	55

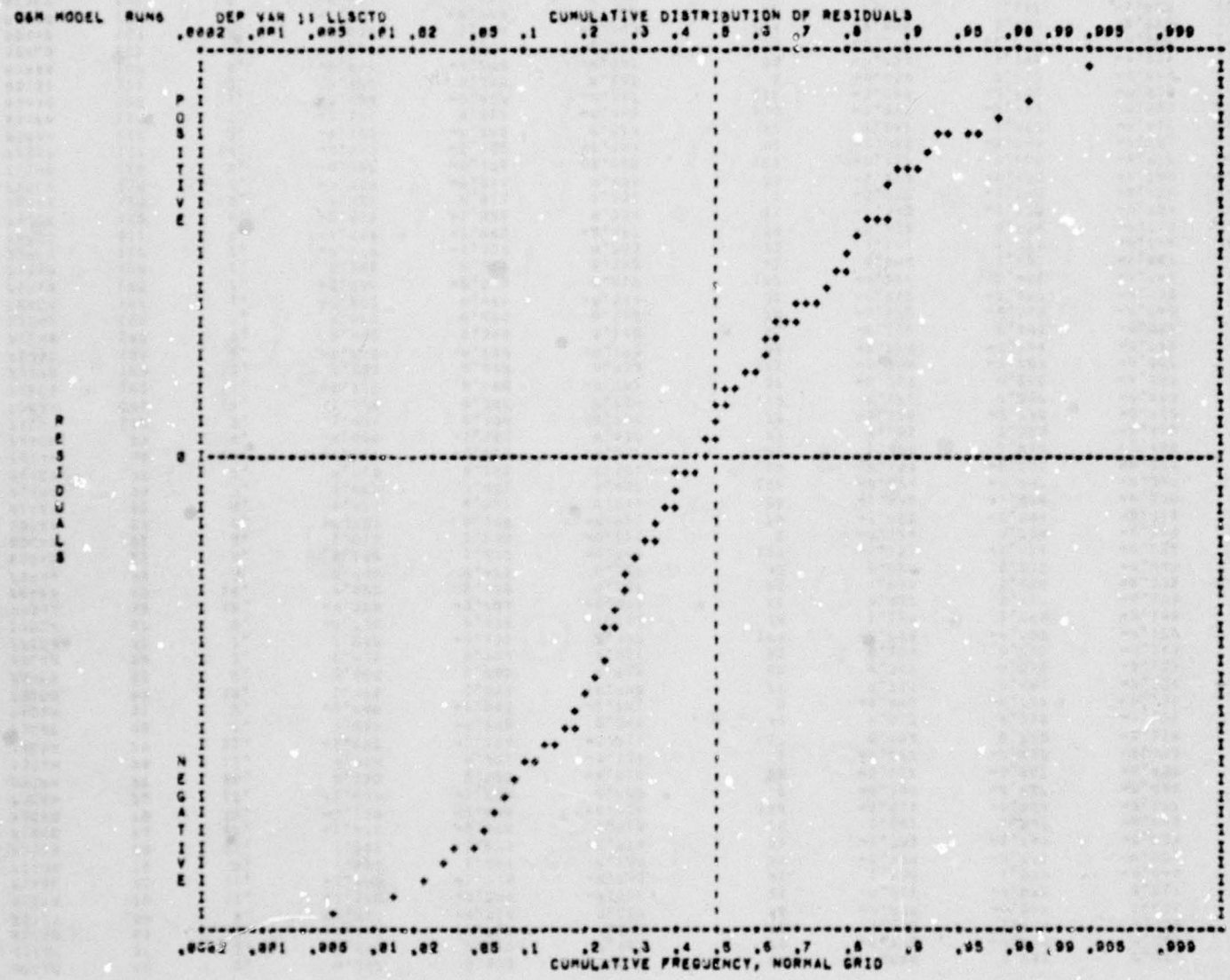
56	0.61	2.78	8	63	1.56	15.14	0.35	-0.13	56	56
57	0.61	2.72	126	127	0.51	8.5[illegible]	0.71	-0.18	58	57
58	0.64	2.76	85	12	0.22	1.39	0.58	-0.19	128	58
59	0.60	2.66	7	22	0.35	15.79	0.95	-0.08	12	59
60	0.64	2.69	4	1	0.66	5.78	0.51	0.06	102	60
61	0.61	2.69	126	116	1.44	12.40	0.39	0.09	2	61
62	0.60	2.81	7	116	0.89	9.21	1.04	0.19	97	62
63	0.62	2.81	103	22	1.78	9.58	0.85	0.20	93	63
64	0.63	2.88	35	116	1.80	2.52	1.90	0.22	8	64
65	0.62	2.90	126	39	0.28	5.96	0.79	0.23	49	65
66	0.62	3.00	83	84	0.37	5.58	0.77	0.23	121	66
67	0.62	3.00	60	103	0.58	6.84	1.24	0.27	37	67
68	0.62	3.04	42	61	1.28	1.36	0.56	0.28	63	68
69	0.62	3.08	124	62	0.83	7.67	0.63	0.30	105	69
70	0.61	3.10	13	68	0.35	9.32	0.78	0.32	119	70
71	0.60	3.12	9	104	0.13	9.99	0.84	0.36	123	71
72	0.60	3.40	112	35	0.82	29.43	0.57	0.39	67	72
73	0.60	3.43	41	106	0.78	19.53	0.16	0.40	101	73
74	0.60	3.48	1	36	0.45	8.23	0.72	0.40	109	74
75	0.59	3.52	60	26	0.14	15.42	0.58	0.40	78	75
76	0.60	3.55	87	90	1.53	2.60	0.65	0.42	59	76
77	0.60	3.56	12	2	0.44	1.73	0.59	0.44	87	77
78	0.60	3.56	2	6	0.61	15.69	0.88	0.46	107	78
79	0.59	3.58	21	122	0.86	19.17	0.96	0.47	41	79
80	0.59	3.60	127	21	0.27	12.87	0.18	0.48	90	80
81	0.60	3.61	2	49	1.29	16.68	0.59	0.49	108	81
82	0.59	3.69	125	114	0.13	15.33	0.23	0.50	100	82
83	0.60	3.76	33	34	1.18	7.33	0.68	0.53	95	83
84	0.60	3.80	53	32	1.21	4.58	0.11	0.53	66	84
85	0.60	3.83	32	58	0.66	25.21	0.86	0.54	43	85
86	0.60	3.88	22	11	0.37	27.94	0.38	0.60	18	86
87	0.59	3.90	60	9	0.89	8.51	0.11	0.61	113	87
88	0.60	3.97	23	98	0.94	18.45	0.55	0.63	24	88
89	0.59	4.02	114	4	0.11	0.0	0.42	0.64	65	89
90	0.59	4.03	58	12	0.14	14.46	0.18	0.64	64	90
91	0.59	4.03	59	90	1.89	8.39	0.55	0.66	28	91
92	0.60	4.13	52	124	0.85	19.11	0.93	0.74	52	92
93	0.59	4.22	6	98	0.51	5.17	0.98	0.77	57	93
94	0.59	4.25	21	39	0.84	16.63	0.18	0.84	40	94
95	0.59	4.44	79	22	0.48	11.58	1.95	0.85	96	95
96	0.58	4.45	79	116	0.22	3.88	0.93	1.05	124	96
97	0.58	4.47	127	122	0.21	29.23	1.86	1.12	62	97
98	0.58	4.59	31	114	0.35	32.87	0.79	1.21	72	98
99	0.57	4.59	66	43	0.11	38.44	0.35	1.21	44	99
100	0.57	4.55	106	43	0.43	0.0	0.21	1.24	92	100
101	0.57	4.59	48	85	0.47	16.79	0.18	1.24	91	101
102	0.57	4.60	1	83	0.47	4.59	0.47	1.38	48	102
103	0.57	4.59	31	19	1.28	6.84	0.33	1.38	85	103
104	0.58	4.64	67	59	0.88	43.71	0.83	1.54	29	104
105	0.58	4.71	32	85	1.83	17.87	1.98	1.63	42	105
106	0.58	4.81	128	98	0.53	14.52	0.28	1.67	51	106
107	0.57	4.82	14	122	0.89	23.48	1.29	1.76	61	107
108	0.58	4.99	82	84	0.78	24.52	0.27	1.78	73	108
109	0.58	4.99	99	65	0.58	7.86	0.48	1.81	82	109
110	0.59	4.97	32	36	0.99	9.98	1.96	1.89	27	110
111	0.59	5.02	87	126	1.35	8.98	0.48	1.87	60	111
112	0.59	5.04	1	34	0.52	3.98	0.37	1.94	83	112
113	0.59	5.08	38	76	0.36	13.17	0.25	2.26	84	113
114	0.59	5.06	99	126	0.22	8.68	0.73	2.38	26	114
115	0.59	5.12	15	68	0.78	11.79	0.67	2.45	163	115
116	0.58	5.13	33	32	0.12	31.97	0.58	2.48	89	116
117	0.58	5.15	104	114	0.83	11.88	1.48	2.58	77	117

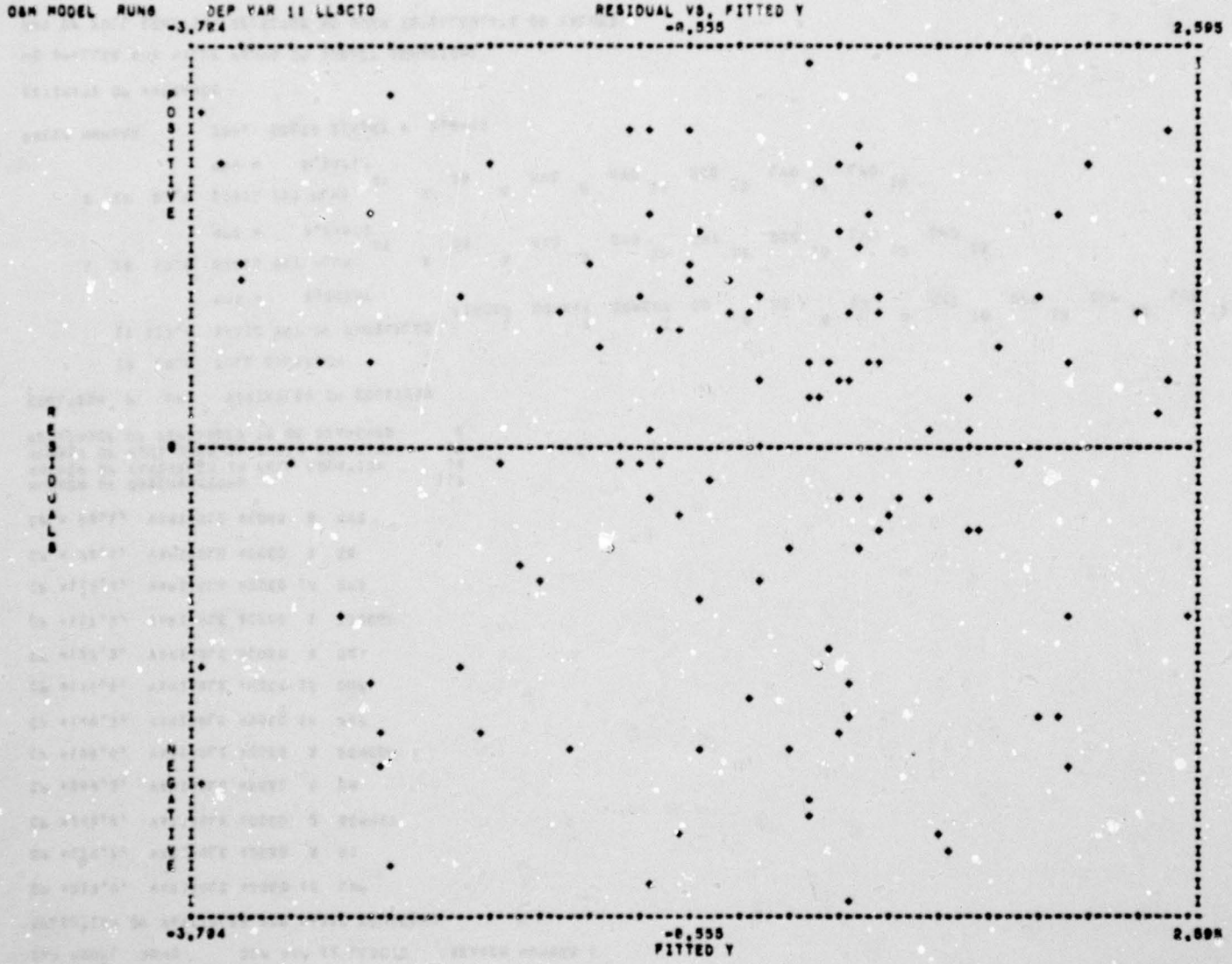
LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUNS DEP VAR IS LLSCTO

ORDERED BY COMPUTER INPUT						ORDERED BY RESIDUALS				
IDENT.	OBSV.	NSS DISTANCE	OBS. Y	FITTED Y	RESIDUAL	OBSV.	OBS. Y	FITTED Y	ORDERED RESID.	SEQ
71B2P	1	1.	-P.522	-P.428	-P.093	49	1.253	P.226	1.026	1
71L88	2	2.	-P.174	P.094	-P.268	74	-1.479	-2.395	P.916	2
71PK3	4	1.	P.118	-P.461	P.579	23	-2.719	-3.610	P.892	3
71P86	5	3.	-P.988	-P.778	-P.138	14	-P.959	-P.918	P.842	4
7171P	6	12.	-2.989	-3.367	P.458	183	3.282	2.448	P.834	5
724GA	7	7.	-3.237	-2.506	-P.731	15	P.813	-P.816	P.828	6
71G58	8	2.	-P.559	P.215	-P.874	31	P.398	-P.514	P.828	7
71FA3	9	4.	-P.785	-P.737	-P.049	189	1.271	P.496	P.775	8
71CAP	11	4.	-2.545	-1.825	-P.728	38	-2.724	-3.483	P.759	9
71DA8	12	2.	P.899	-P.785	P.175	78	-1.P18	-1.766	P.756	10
51EAP	13	3.	-P.445	-P.845	P.400	191	1.136	P.397	P.739	11
52AA3	14	3.	-P.959	-P.919	P.842	83	2.665	1.940	P.725	12
52A8P	15	5.	P.813	-P.816	P.828	63	P.988	P.276	P.703	13
74JAP	16	26.	1.215	P.599	P.617	198	-1.999	-2.519	P.519	14
74JC8	19	4.	-P.883	-P.505	-P.377	18	1.215	P.599	P.617	15
52GA1	20	7.	-P.384	-P.718	P.334	118	-P.192	-P.506	P.614	16
71ZA8	21	2.	-P.951	-P.978	P.017	61	2.378	1.758	P.612	17
71Z8P	22	9.	-3.595	-2.428	-1.066	109	P.988	P.399	P.562	18
71ZCP	23	14.	-2.719	-3.610	P.892	4	P.118	-P.461	P.578	19
73EG8	24	6.	P.985	P.632	P.352	95	1.P71	P.527	P.544	20
73EPP	25	11.	1.678	1.385	P.286	69	-P.P13	-P.513	P.500	21
73HA8	26	16.	2.461	2.377	P.184	128	-2.888	-3.371	P.483	22
73HC8	27	7.	1.P42	1.852	-P.811	99	-P.585	-1.168	P.477	23
73NA8	28	18.	1.P81	P.676	P.405	114	-P.956	-P.514	P.458	24
73G88	29	8.	1.581	1.548	-P.P48	6	-2.999	-3.367	P.458	25
73K88	31	3.	P.368	-P.514	P.828	34	P.135	-P.295	P.438	26
73KEP	32	3.	-P.812	-P.188	-P.632	51	2.877	1.666	P.411	27
73KF8	33	1.	-1.293	-P.455	-P.748	28	1.P81	P.676	P.409	28
73KN8	34	5.	P.135	-P.295	P.438	13	-P.445	-P.845	P.408	29
75938	35	7.	-2.357	-2.569	P.212	85	P.268	-P.131	P.397	30
74R0A	36	2.	P.281	-P.156	P.357	36	-1.556	-1.951	P.395	31
748F9	37	6.	-P.268	P.268	-P.537	88	P.267	-P.P98	P.365	32
74B1P	38	10.	-1.556	-1.951	P.395	53	P.887	-P.298	P.377	33
78A1P	39	3.	-P.999	-P.978	-P.021	92	P.848	P.479	P.369	34
78GAP	40	9.	P.815	P.936	-P.121	30	P.281	-P.156	P.357	35
74FF8	41	14.	-P.12P	P.466	-P.586	118	-P.976	-1.329	P.353	36
74FA8	42	42.	P.964	1.532	-P.567	24	P.985	P.632	P.352	37
74FH8	43	4.	P.295	P.538	-P.243	84	2.615	2.264	P.351	38
74FUP	44	96.	1.344	1.214	P.130	28	-P.384	-P.718	P.334	39
73CGP	46	12.	-1.852	-P.763	-1.P89	125	-P.278	-P.604	P.325	40
74FC8	48	8.	1.113	1.299	-P.186	25	1.678	1.385	P.286	41
74FJ8	49	2.	1.253	P.226	1.P26	126	-P.874	-1.132	P.258	42
74FK8	50	7.	-2.724	-3.483	P.759	8P	2.118	1.878	P.240	43
74FQP	51	32.	2.077	1.666	P.411	113	P.851	P.613	P.230	44
74KA8	52	5.	P.598	P.742	-P.143	112	-2.611	-2.848	P.237	45
74KC8	53	4.	P.987	-P.294	P.377	121	P.472	P.235	P.237	46
74CBP	55	4.	-1.598	-P.638	-P.958	64	P.861	P.636	P.226	47
74CCH	56	4.	-1.884	-1.475	-P.325	35	-2.357	-2.569	P.212	48
74FA1	57	18.	P.654	P.772	-P.118	123	P.567	P.356	P.211	49
74EB8	58	3.	-P.998	-P.129	P.031	196	P.675	P.486	P.189	50
73PH8	59	2.	-P.288	P.419	-P.718	12	P.899	-P.885	P.175	51
73P98	60	18.	2.118	1.878	P.240	89	2.622	2.456	P.167	52
73PD8	61	29.	2.378	1.758	P.612	67	P.558	P.392	P.166	53
73PF8	62	13.	P.899	1.117	-1.018	185	P.446	P.303	P.143	54
73PH8	63	3.	P.988	P.276	P.783	44	1.344	1.214	P.130	55
71NA8	64	3.	P.851	P.636	P.226	97	P.315	P.191	P.124	56
71QU8	65	3.	P.439	P.636	-P.196	26	2.481	2.377	P.104	57

63AAB	66	2.	0.397	0.532	-0.135	96	1.228	0.951	0.857	58
65AA8	67	3.	0.558	0.392	0.166	68	-0.749	-0.795	0.245	59
63AG8	68	3.	-0.749	-0.795	0.045	72	1.253	1.214	0.039	60
638C8	69	9.	-0.813	-0.513	0.300	58	-0.998	-0.129	0.851	61
638F8	76	12.	-3.172	-2.566	-0.606	21	-0.961	-0.978	0.017	62
71ABE	71	11.	-1.782	-1.745	-0.036	91	1.238	1.239	-0.999	63
71AD4	72	9.	1.253	1.214	0.039	39	-0.999	-0.978	-0.021	64
73DB4	73	21.	1.101	1.775	-0.674	71	-1.782	-1.745	-0.036	65
71ACC	74	27.	-1.479	-2.395	0.916	29	1.581	1.549	-0.068	66
73C8Q	75	38.	-3.126	-2.706	-0.420	122	-0.911	-0.864	-0.047	67
73CEN	76	16.	-1.810	-1.766	0.756	9	-0.788	-0.737	-0.049	68
73CP4	77	36.	2.185	2.595	-0.410	98	-3.117	-3.067	-0.058	69
73DAH	78	11.	0.268	0.401	-0.134	1	-0.522	-0.428	-0.093	70
73ER4	79	11.	-1.895	-1.584	-0.311	57	0.654	0.772	-0.118	71
73E6F	80	7.	0.287	-0.098	0.385	48	0.815	0.936	-0.121	72
71CAP	81	9.	-2.866	-1.285	-0.781	5	-0.988	-0.778	-0.139	73
73EG8	82	18.	1.498	1.014	0.486	78	0.268	0.401	-0.134	74
73MC8	83	9.	2.665	1.940	0.725	66	0.397	0.532	-0.135	75
73LA8	84	5.	2.615	2.264	0.351	52	0.598	0.742	-0.143	76
77EC8	85	1.	0.266	-0.131	0.397	104	-0.798	-0.622	-0.176	77
77DC4	87	2.	-0.726	0.438	-1.164	48	1.113	1.299	-0.186	78
77D88	88	18.	-4.274	-3.784	-0.578	65	0.439	0.636	-0.196	79
76AEA	89	16.	2.622	2.456	0.167	92	1.218	1.239	-0.221	80
73KA8	90	3.	0.848	0.479	0.369	43	0.295	0.538	-0.243	81
638A4	91	6.	1.239	1.239	-0.000	127	-1.323	-1.071	-0.252	82
63CA4	92	6.	1.018	1.239	-0.221	2	-0.174	0.094	-0.268	83
658A4	93	6.	-0.723	0.198	-0.921	79	-1.895	-1.584	-0.311	84
61AA8	95	6.	1.971	0.527	0.544	56	-1.884	-1.478	-0.326	85
61AN8	96	5.	1.228	0.951	0.857	128	-0.424	-0.097	-0.327	86
61AC8	97	7.	0.315	0.191	0.124	19	-0.883	-0.505	-0.377	87
72AAP	98	28.	-3.117	-3.067	-0.050	82	1.498	1.814	-0.486	88
72AC8	99	9.	-0.656	-1.163	0.477	77	2.185	2.595	-0.410	89
71CA8	100	5.	1.271	0.496	0.775	75	-3.126	-2.706	-0.420	90
72EA4	101	10.	1.135	0.397	0.739	119	-0.171	0.317	-0.488	91
72ECA	102	11.	-0.717	0.060	-0.777	37	-0.268	0.268	-0.537	92
738P0	103	13.	3.282	2.448	0.834	111	-2.569	-2.002	-0.567	93
71JA8	104	2.	-0.798	-0.622	-0.176	88	-4.274	-3.784	-0.578	94
71LA8	105	2.	0.446	0.303	0.143	41	-0.120	0.466	-0.586	95
72DN8	106	7.	0.875	0.488	0.189	79	-3.172	-2.586	-0.586	96
72AC8	107	1.	-0.292	0.46.	-0.664	32	-0.812	-0.180	-0.632	97
71716	108	7.	-1.988	-2.519	0.619	107	-0.282	0.481	-0.864	98
7131D	109	5.	0.988	0.399	0.582	42	0.964	1.632	-0.667	99
72RF8	110	6.	-0.936	-1.329	0.353	73	1.101	1.775	-0.674	100
72R82	111	9.	-2.569	-2.002	-0.567	59	-0.298	0.419	-0.718	101
71JCE	112	8.	-2.611	-2.848	0.237	11	-2.545	-1.825	-0.720	102
72AER	113	9.	0.951	0.613	0.338	7	-3.237	-2.506	-0.731	103
72CC8	114	2.	-0.956	-0.514	0.458	33	-1.293	-0.455	-0.748	104
71Z9R	116	8.	-3.297	-2.472	-0.825	102	-0.717	0.060	-0.777	105
7120P	117	14.	-4.529	-3.662	-0.868	81	-2.866	-1.285	-0.781	106
858AE	118	3.	-0.192	-0.806	0.614	27	1.042	1.852	-0.811	107
63AFR	119	3.	-0.171	0.317	-0.488	116	-3.297	-2.472	-0.825	108
63AA8	120	1.	-0.424	-0.097	-0.327	117	-4.529	-3.662	-0.868	109
63121	121	3.	0.472	0.235	0.237	8	-0.659	0.215	-0.874	110
63AAA	122	6.	-0.911	-0.864	-0.047	93	-0.723	0.198	-0.921	111
55AL8	123	4.	0.567	0.356	0.211	55	-1.598	-0.638	-0.958	112
55AV8	124	8.	0.858	1.850	-0.992	124	0.858	1.850	-0.992	113
61AA8	125	2.	-0.278	-0.604	0.325	62	0.999	1.117	-1.018	114
61AE8	126	5.	-0.874	-1.132	0.258	22	-3.588	-2.428	-1.086	115
62AA8	127	3.	-1.323	-1.071	-0.252	46	-1.652	-0.783	-1.889	116
64211	128	11.	-0.888	-3.371	0.483	87	-0.726	0.438	-1.164	117


G&M MODEL RUN6
DEP VAR IS LLSCTD
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
SPACE0ISER
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID


O&M MODEL RUNS
DEP VAR IS LLSCTO
RESIDUAL VS. FITTED Y
-3.724
-8.555
2.595
POSITIVE
0
NEGATIVE
RESIDUAL
-3.724
-8.555
2.595
FITTED Y

CP VALUES FOR THE SELECTION OF VARIABLES

O&M MODEL RUNS DEP VAR IS LLBCTO SEARCH NUMBER 1

SELECTION OF VARIABLES FOR BASIC EQUATION

CP =319.8, VARIABLE ADDED 16 LUP

CP =279.7, VARIABLE ADDED 5 DI

CP =242.8, VARIABLE ADDED 2 BOMNAV

CP =204.3, VARIABLE ADDED 6 EM

CP =198.6, VARIABLE ADDED 3 BOMCOM

CP =148.3, VARIABLE ADDED 18 PWT

CP =131.8, VARIABLE ADDED 15 DUP

CP =125.3, VARIABLE ADDED 4 CD

CP =117.8, VARIABLE ADDED 1 FIGCOM

CP =113.4, VARIABLE ADDED 14 OPS

CP = 72.1, VARIABLE ADDED 8 SS

CP = 73.1, VARIABLE ADDED 9 MVO

NUMBER OF OBSERVATIONS = 117
NUMBER OF VARIABLES IN FULL EQUATION = 18
NUMBER OF VARIABLES IN BASIC EQUATION = 10
REMAINDER OF VARIABLES TO BE SEARCHED = 8

EQUATION	P	CP	VARIABLES IN EQUATION
	19	19.0	FULL EQUATION
	11	113.4	BASIC SET OF VARIABLES 1 FIGCOM, 2 BOMNAV, 3 BOMCOM, 4 CD, 5 DI, 6 EM, 10 PWT, 14 OPS, 15 DUP, 16 LUP
			RMS = 0.66167
1	10	19.0	BASIC SET PLUS 7 XT, 8 SS, 9 MVO, 11 OVO, 12 PWT, 13 DCC, 17 LVO, 18 LPO
			RMS = 0.34878
2	10	21.0	BASIC SET PLUS 7 XT, 8 SS, 9 MVO, 11 OVO, 13 DCC, 17 LVO, 18 LPO
			RMS = 0.35713

SWEEP NUMBER 255, DELTA Z(N,N) = 1.0-18

ESTIMATE OF VARIANCE

NO SMALLER RMS VALUE FOUND IN SUBSET EQUATIONS

RMS OF FULL EQUATION SELECTED BY USER TO CALCULATE CP VALUES

SEQ	EQUATION	P	ORDERED CP
1	1	10	19.0
2	2	10	21.0

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN7 DEP VAR IS LLSCFD MIN Y = -4.5260 PP MAX Y = 2.3420 00 RANGE Y = 6.8710 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPOS" MODEL

LLSCFD = B(0) + B(1)FIGCOM + B(2)BOMNAV + B(3)BOMCOM + B(4)*T
+ B(5)CO + B(6)DI + B(7)EM + B(8)XT + B(9)SS + B(10)MVO
+ B(11)OVO + B(12)OCC + B(13)OPS + B(14)OUF + B(15)LUP
+ B(16)LVO + B(17)LPO

LLSCFD = LN(LSCFLD)

LSCFLD = FIELD LOGISTICS SUPPORT COST PER OPERATING HOUR

IND.VAR(I)	NAME	COEF.B(I) -8.639450 PP	S.E. COEF.	T-VALUE	R(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL.INF.X(I)
0									
1	FIGCOM	8.349840-01	2.280-01	3.7	0.1254	0.0	1.0000 00	1.0000 00	0.12
2	BOMNAV	8.531990-01	1.840-01	4.7	0.2584	0.0	1.0000 00	1.0000 00	0.12
3	BOMCOM	9.139510-01	2.170-01	4.2	0.1591	0.0	1.0000 00	1.0000 00	0.13
4	WT	1.395840-02	3.940-03	3.4	0.0341	1.0000 00	1.7370 02	1.7270 02	0.35
5	CO	1.999490-01	5.840-02	4.8	0.3625	4.9230-03	8.6740 00	8.6690 00	0.19
6	DI	-1.357490-02	1.880-03	7.2	0.4672	0.0	1.0000 02	1.0000 02	0.29
7	EM	-2.435210-02	3.160-03	7.7	0.5238	0.0	1.0000 02	1.0000 02	0.35
8	XT	-1.132440-02	3.940-03	2.9	0.5879	0.0	1.0000 02	1.0000 02	0.16
9	SS	-1.163170-02	2.470-03	0.7	0.6668	0.0	1.0000 02	1.0000 02	0.17
10	MVO	-2.741740-04	1.930-04	2.7	0.6922	-1.3930 03	6.8470 03	6.1740 03	0.33
11	OVO	3.563490-08	2.470-08	1.5	0.7351	1.9360 03	2.4780 07	2.4760 07	0.13
12	OCC	-3.849240-09	1.660-08	2.3	0.3537	1.6000 01	2.8230 07	2.8230 07	0.16
13	OPS	-3.852410-04	1.380-04	2.3	0.2336	3.8190 01	2.9720 03	2.9340 03	0.13
14	OUF	8.567940-01	1.760-01	3.7	0.1659	2.7640-01	2.9150 00	2.8400 00	0.18
15	LUP	5.229850-01	5.420-02	9.6	0.4887	5.9300 00	1.3250 01	8.2170 00	0.62
16	LVO	5.472870-01	1.420-01	3.9	0.9183	3.4810 00	9.8120 00	5.6110 00	0.45
17	LPO	1.181950-01	5.510-02	2.1	0.6844	1.0990 00	8.0880 00	6.9880 00	0.12

NO. OF OBSERVATIONS	118
NO. OF IND. VARIABLES	17
RESIDUAL DEGREES OF FREEDOM	98
F-VALUE	42.6
RESIDUAL ROOT MEAN SQUARE	0.54675717
RESIDUAL MEAN SQUARE	0.29894348
RESIDUAL SUM OF SQUARES	29.29645299
TOTAL SUM OF SQUARES	245.97996478
MULT. CORREL. COEF. SQUARED	.88J8

DERIVED X(I) PRECISION
(DIGIT RIGHT OF DECIMAL POSITIVE,
LEFT OF DECIMAL NEGATIVE)

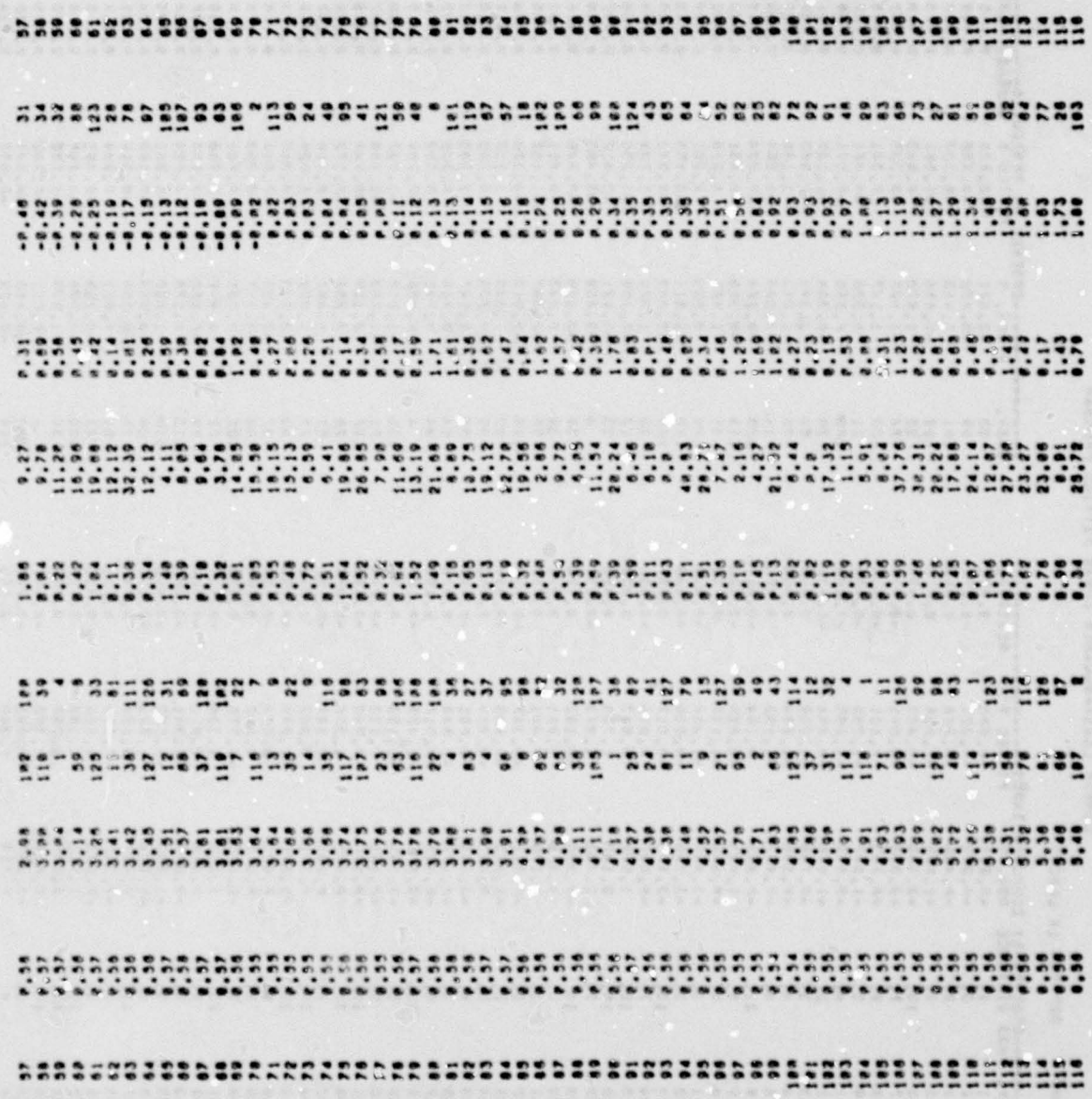
IND.VAR(I)	DIGIT
1	-1
2	-1
3	-1
4	-2
5	1
6	-2
7	-2
8	-2
9	-2
10	-4
11	-7
12	-7
13	-4
14	1
15	1
16	1
17	1

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN7 DEP VAR IS LLSCFD RESIDUAL ROOT MEAN SQUARE OF FITTED EQUATION: 0.55

STANDARD DEVIATION ESTIMATED FROM RESIDUALS OF NEIGHBORING OBSERVATIONS (OBSERVATIONS 1 TO 4 APART IN FITTED Y ORDER).

NO.	CUMULATIVE STD DEV	ORDERED BY WSSD				ORDERED BY FITTED Y				
		WSSD	OBSV.	OBSV.	DEL RESIDUALS	WSSD	DEL RESIDUALS	FITTED Y	OBSV.	SEQ.
1	0.22	0.0	92	91	0.23	28.81	1.83	-4.19	88	1
2	0.35	0.0	65	64	0.48	9.85	1.82	-3.76	59	2
3	0.24	0.01	118	22	0.83	0.01	1.37	-3.69	117	3
4	0.31	0.01	117	23	1.37	0.34	0.98	-3.62	23	4
5	0.45	0.03	109	108	0.24	2.28	0.84	-3.47	6	5
6	0.41	0.14	14	13	0.17	5.02	0.28	-3.37	128	6
7	0.39	0.28	93	58	0.33	15.66	0.37	-3.29	96	7
8	0.35	0.28	6	126	0.84	14.58	0.98	-3.15	112	8
9	0.31	0.34	23	6	0.08	23.46	0.28	-2.82	78	9
10	0.41	0.35	117	6	1.36	16.29	0.13	-2.74	75	10
11	0.39	0.44	113	24	0.21	28.36	0.36	-2.68	35	11
12	0.47	0.48	117	125	1.32	31.52	0.87	-2.62	78	12
13	0.43	0.49	23	128	0.84	3.54	0.85	-2.60	116	13
14	0.45	0.58	71	81	0.75	3.63	0.91	-2.58	7	14
15	0.45	0.58	35	7	0.47	3.79	1.49	-2.56	22	15
16	0.47	0.64	105	24	0.82	27.66	0.64	-2.54	108	16
17	0.45	0.79	129	85	0.83	39.11	0.92	-2.48	38	17
18	0.43	0.81	13	15	0.84	29.68	1.21	-2.34	74	18
19	0.44	0.86	71	79	0.75	15.99	0.67	-2.31	111	19
20	0.48	0.91	26	103	1.43	4.93	0.66	-2.25	71	20
21	0.49	0.92	105	113	0.81	4.48	0.11	-1.95	11	21
22	0.50	0.92	85	31	0.65	16.71	0.25	-1.89	79	22
23	0.49	0.93	12	32	0.91	13.72	0.25	-1.78	56	23
24	0.47	0.96	79	81	0.68	19.37	1.36	-1.58	81	24
25	0.50	1.09	7	108	1.47	13.69	1.29	-1.56	99	25
26	0.51	1.11	49	59	0.81	4.57	0.36	-1.43	21	26
27	0.51	1.11	125	1	0.55	3.45	0.34	-1.38	127	27
28	0.50	1.12	33	104	0.36	33.29	0.87	-1.38	126	28
29	0.50	1.15	48	29	0.53	31.93	1.26	-1.29	46	29
30	0.52	1.19	91	14	1.08	0.14	0.17	-1.26	14	30
31	0.51	1.23	1	104	0.13	3.84	0.55	-1.26	13	31
32	0.50	1.24	43	52	0.12	10.65	0.29	-1.25	9	32
33	0.50	1.31	120	12	0.72	17.50	0.91	-1.20	110	33
34	0.51	1.32	33	4	0.71	2.29	0.92	-1.17	55	34
35	0.53	1.34	61	42	1.25	12.38	0.35	-1.15	15	35
36	0.53	1.40	5	110	0.61	7.33	0.65	-1.15	39	36
37	0.54	1.46	110	33	1.02	0.83	0.55	-1.14	20	37
38	0.53	1.70	123	105	0.38	6.89	0.56	-1.10	122	38
39	0.53	1.74	33	1	0.49	0.46	0.47	-1.06	68	39
40	0.54	1.81	13	55	0.96	10.25	0.32	-1.04	5	40
41	0.53	1.88	56	21	0.10	10.63	0.32	-0.98	60	41
42	0.52	1.93	105	53	0.87	6.58	0.42	-0.95	118	42
43	0.53	2.06	129	31	0.68	4.85	0.42	-0.92	125	43
44	0.53	2.07	27	27	0.73	6.01	0.42	-0.85	114	44
45	0.54	2.09	55	15	0.92	1.74	0.49	-0.80	33	45
46	0.53	2.15	39	5	0.89	1.23	0.13	-0.80	1	46
47	0.54	2.16	62	25	1.09	2.79	0.36	-0.80	104	47
48	0.53	2.22	19	53	0.14	7.84	0.66	-0.78	4	48
49	0.54	2.22	105	106	0.76	9.88	0.40	-0.75	19	49
50	0.55	2.31	14	55	1.13	11.31	0.58	-0.65	36	50
51	0.55	2.40	125	104	0.89	13.27	0.19	-0.64	53	51
52	0.55	2.47	126	9	0.33	3.61	0.18	-0.62	37	52
53	0.54	2.64	108	71	0.27	6.41	0.74	-0.54	129	53
54	0.55	2.74	85	12	0.75	6.16	0.48	-0.52	58	54
55	0.56	2.79	104	4	0.38	2.74	0.75	-0.48	85	55
56	0.56	2.86	102	100	1.02	3.51	1.48	-0.46	12	56

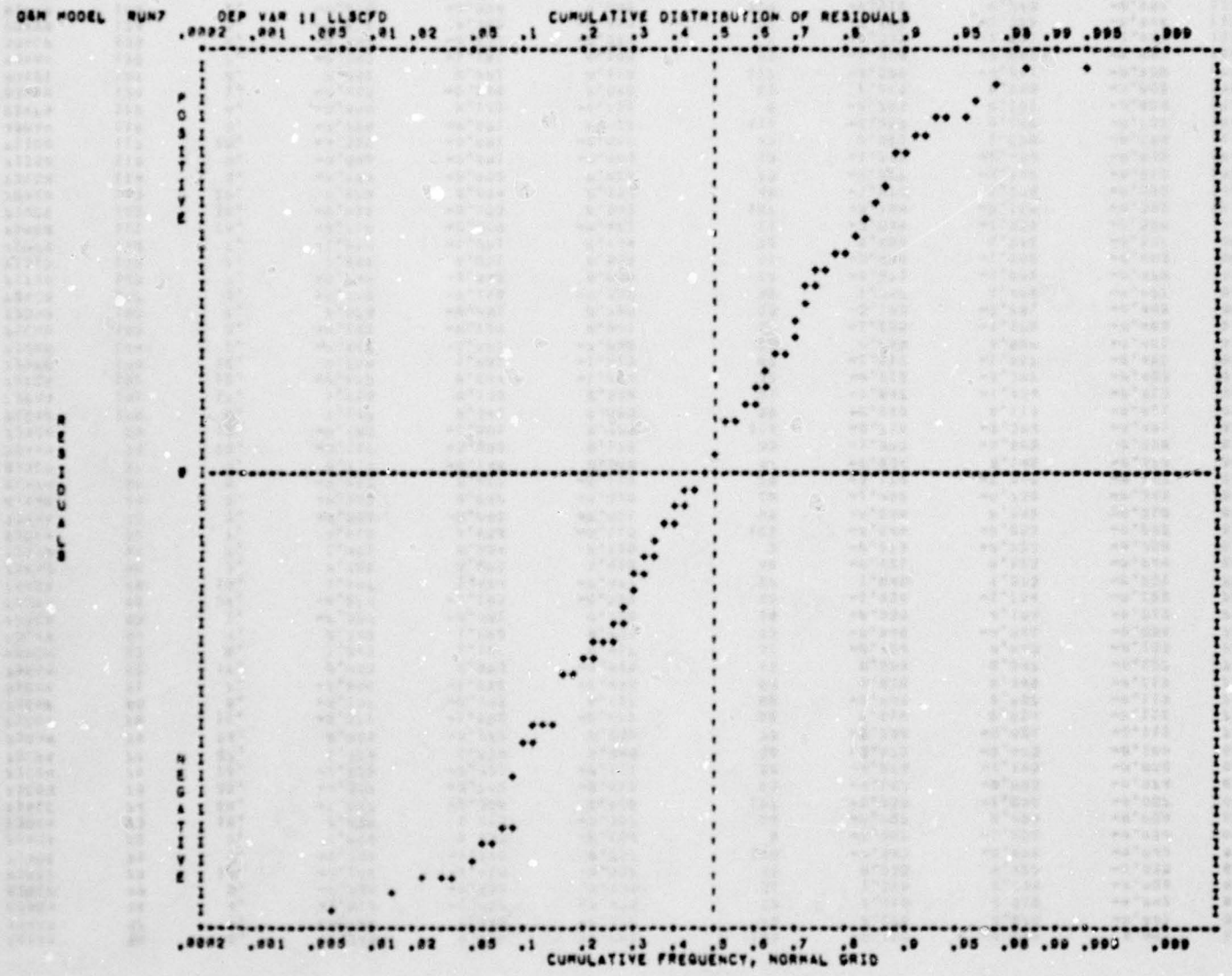


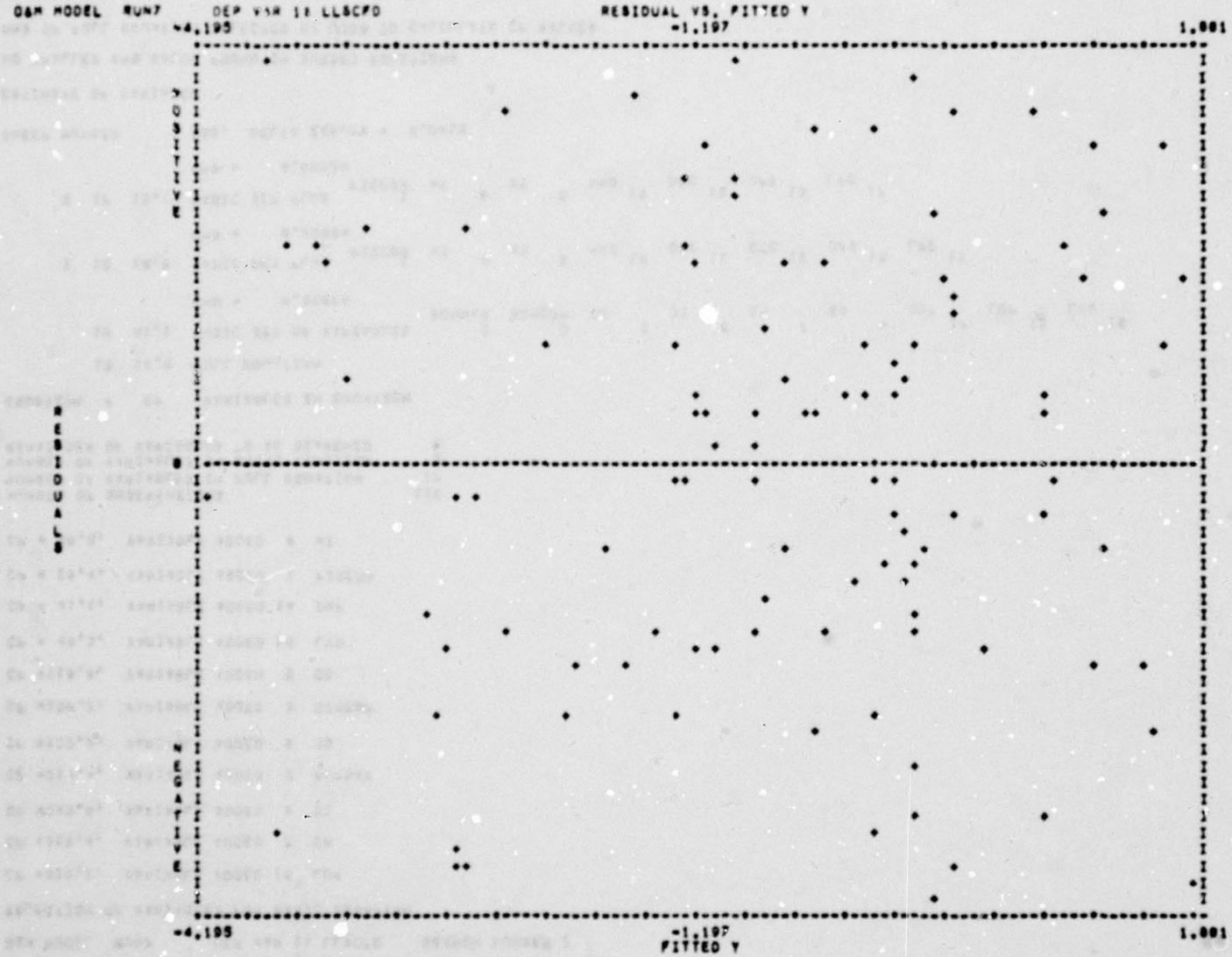
LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

B&M MODEL RUN7 DEP VAR IS LLSCFD

IDENT.	OBSV.	ORDERED BY COMPUTER INPUT: MSS DISTANCE	OBS. Y	FITTED Y	RESIDUAL	ORDERED BY RESIDUALS: OBSV.	OBS. Y	FITTED Y	ORDERED RESID.	SEQ
71B2B	1	1.	-P.711	-P.883	P.991	58	-2.821	-3.778	P.955	1
71L8B	2	3.	-P.273	-P.823	-P.259	69	-P.P2P	-P.958	P.936	2
71PKB	4	2.	-P.459	-P.784	P.315	181	1.913	P.133	P.882	3
71P9B	5	3.	-1.922	-1.836	P.P14	99	-P.586	-1.561	P.875	4
71K1P	6	13.	-2.949	-3.465	P.496	25	1.678	P.843	P.P28	5
72AGB	7	7.	-3.535	-2.681	-P.934	74	-1.527	-2.336	P.888	6
71G5P	8	2.	-P.783	P.131	-P.834	189	1.147	P.341	P.885	7
71FAB	9	5.	-1.347	-1.253	-P.854	31	P.376	-P.461	P.787	8
71CAB	11	4.	-P.545	-1.955	-P.598	186	P.675	-P.891	P.766	9
71DAP	12	2.	-1.886	-P.664	-P.632	2P	-P.384	-1.135	P.751	10
51EAB	13	3.	-P.758	-1.256	P.498	84	2.342	1.693	P.739	11
92AAP	14	4.	-P.595	-1.254	P.659	6P	1.912	1.186	P.726	12
92ABP	15	6.	-P.697	-1.153	P.456	14	-P.596	-1.264	P.669	13
74JAB	16	21.	-P.835	P.183	-P.219	125	-P.278	-P.924	P.646	14
74JCB	19	5.	-1.992	-P.758	-P.342	115	-P.328	-P.951	P.623	15
92GA1	20	6.	-P.384	-1.135	P.751	61	1.867	1.286	P.582	16
71ZAP	21	3.	-1.847	-1.434	-P.413	179	P.82P	P.251	P.569	17
71ZBP	22	9.	-3.586	-2.558	-P.P28	112	-2.611	-3.153	P.543	18
71ZCB	23	15.	-3.121	-3.617	P.497	166	-2.P84	-2.542	P.538	19
73EGB	24	7.	-P.927	P.P29	-P.856	29	1.5P1	1.2P1	P.5P3	2P
73EPP	25	12.	1.578	P.843	P.828	13	-P.758	-1.256	P.498	21
73HAB	26	15.	P.147	1.733	P.413	23	-3.121	-3.617	P.497	22
73HCB	27	7.	1.842	1.273	-P.231	8	-2.989	-3.465	P.496	23
73NAP	28	16.	-P.858	-P.192	P.124	36	-P.179	-P.648	P.478	24
73088	29	6.	1.591	1.191	P.5PP	34	P.443	-P.418	P.462	25
73K9P	31	3.	P.3P6	-P.461	P.767	15	-P.697	-1.153	P.456	26
73KEP	32	2.	-P.812	-P.387	-P.425	128	-2.919	-3.374	P.454	27
73KFB	33	2.	-1.293	-P.885	-P.398	83	1.545	1.127	P.417	28
73KKB	34	5.	P.243	-P.418	P.462	98	P.789	P.295	P.415	29
7593P	35	8.	-3.149	-2.681	-P.468	28	P.147	1.733	P.413	3P
74RDP	36	3.	-P.178	-P.648	P.478	64	P.714	P.349	P.365	31
74RFB	37	6.	-P.428	-P.617	P.188	44	P.791	P.362	P.342	32
74R1P	38	21.	-2.575	-2.475	-P.1PP	4	-P.469	-P.784	P.315	33
78A1B	39	3.	-1.949	-1.152	P.193	126	-1.018	-1.297	P.282	34
78GAB	4P	9.	-P.121	P.123	-P.244	71	-1.782	-2.P48	P.267	35
74FFB	41	16.	-P.12P	P.P45	-P.165	97	P.118	-P.148	P.266	36
74F4P	42	3P.	P.912	1.578	-P.664	76	P.P88	-P.172	P.262	37
74FHP	43	4.	P.229	P.347	-P.127	57	P.4P7	P.168	P.247	38
74FU2	44	34.	P.791	P.362	P.349	77	1.874	1.629	P.246	39
73CGP	45	22.	-1.878	-1.278	-P.592	49	P.243	P.P48	P.2P4	4P
74FCB	48	8.	P.935	P.978	-P.P35	3P	-P.429	-P.617	P.188	41
74FJB	49	2.	P.243	P.P48	P.2P4	98	-3.117	-3.293	P.176	42
74FKB	5P	8.	-2.821	-3.776	P.955	121	P.251	P.P81	P.17P	43
74FQB	51	23.	1.318	1.338	-P.P2P	72	1.992	P.933	P.159	44
74K4B	52	5.	P.518	P.512	P.PP2	8P	-P.127	-P.285	P.157	45
74KCB	53	4.	-P.848	-P.641	-P.286	113	P.178	P.P24	P.154	46
74C9P	55	5.	-1.635	-1.172	-P.463	118	-1.956	-1.281	P.144	47
74CCP	56	5.	-1.934	-1.774	-P.229	2P	-P.P68	-P.192	P.124	48
74FA1	57	11.	P.497	P.188	P.247	58	-P.398	-P.519	P.121	49
74EH8	58	4.	-P.398	-P.519	P.121	91	1.951	P.934	P.116	5P
73PH8	59	2.	-P.298	P.113	-P.411	85	-P.365	-P.481	P.116	51
73P88	6P	18.	1.912	1.186	P.726	122	-P.996	-1.1P1	P.1P6	52
73PD8	61	23.	1.867	1.288	P.582	39	-1.749	-1.152	P.1P3	53
73PFP	62	14.	P.P99	P.568	-P.461	1	-P.711	-P.883	P.P91	54
73PHB	63	3.	-P.167	-P.P03	-P.P74	12P	-P.455	-P.549	P.P85	55
71NAB	64	4.	P.714	P.349	P.365	114	-P.828	-P.852	P.P24	56
71DU8	65	4.	P.23P	P.349	-P.119	5	-1.922	-1.936	P.014	57

83AA8	66	3.	0.276	0.278	-0.001	185	-0.125	-0.126	0.001	58
85AA8	67	4.	-0.294	0.148	-0.379	66	0.276	0.278	-0.001	59
83AG8	68	4.	-1.512	-1.057	-0.455	57	0.518	0.512	-0.992	60
83BC8	69	9.	-0.920	-0.958	0.038	51	1.318	1.338	-0.020	61
83BF8	70	14.	-3.172	-2.815	-0.357	46	0.935	0.970	-0.035	62
71A9E	71	9.	-1.782	-2.048	0.267	104	-0.843	-0.801	-0.042	63
71ADA	72	9.	1.992	0.933	0.159	9	-1.387	-1.253	-0.054	64
13D9A	73	18.	0.606	1.293	-0.587	24	-0.927	0.029	-0.956	65
71ACC	74	26.	-1.527	-2.336	0.808	127	-1.355	-1.298	-0.057	66
73C9G	75	33.	-3.357	-2.742	-0.615	63	-0.187	-0.093	-0.074	67
73CEN	76	28.	-2.732	-2.621	-0.111	88	-4.274	-4.195	-0.088	68
83CF4	77	27.	1.874	1.629	0.246	38	-2.575	-2.475	-0.100	69
73DAH	78	14.	0.988	-0.172	0.260	78	-2.732	-2.621	-0.111	70
73E8A	79	11.	-2.371	-1.892	-0.479	92	0.819	0.934	-0.115	71
73EOF	80	8.	-0.127	-0.285	0.157	96	-0.992	0.927	-0.119	72
71CA8	81	7.	-2.856	-1.582	-0.493	65	0.230	0.349	-0.119	73
73EG8	82	10.	0.855	0.923	-0.059	43	0.228	0.347	-0.127	74
73HC8	83	8.	1.545	1.127	0.417	41	-0.120	0.045	-0.165	75
73LA8	84	4.	2.342	1.603	0.739	53	-0.848	-0.641	-0.206	76
77EC8	85	1.	-0.365	-0.481	0.116	10	-0.035	0.184	-0.219	77
77DA8	86	29.	-4.274	-4.195	-0.080	56	-1.934	-1.704	-0.229	78
76AEA	09	15.	1.007	1.484	-0.477	27	1.042	1.273	-0.231	79
73KA8	98	3.	0.709	0.295	0.415	40	-0.121	0.123	-0.244	80
83BA8	91	7.	1.951	0.934	0.118	2	-0.273	-0.023	-0.250	81
13CA4	92	7.	0.819	0.934	-0.115	123	-0.548	-0.253	-0.295	82
15BA4	93	5.	-0.990	-0.799	-0.191	95	-0.268	0.042	-0.310	83
61AA8	95	5.	-0.268	0.042	-0.310	19	-1.892	-0.750	-0.342	84
61AB8	96	5.	-0.892	0.927	-0.119	78	-3.172	-2.815	-0.357	85
61ACB	97	8.	0.118	-0.148	0.266	87	-0.224	0.146	-0.370	86
72AA8	98	22.	-3.117	-3.293	0.176	33	-1.293	-0.885	-0.398	87
72AC8	99	10.	-0.486	-1.561	0.075	111	-2.710	-2.309	-0.401	88
71CA7	100	6.	1.147	0.341	0.805	59	-0.298	0.113	-0.411	89
72EA4	101	17.	1.913	0.133	0.780	21	-1.847	-1.434	-0.413	90
73ECA	102	12.	-0.809	0.244	-1.054	32	-0.812	-0.387	-0.425	91
72BPO	103	12.	0.788	1.801	-1.013	68	-1.512	-1.057	-0.455	92
71JAP	104	2.	-0.543	-0.801	-0.742	62	0.899	0.568	-0.461	93
71LA8	105	3.	-0.125	-0.126	0.001	55	-1.635	-1.172	-0.463	94
72D48	106	8.	0.675	-0.091	0.766	35	-3.149	-2.681	-0.468	95
72AC8	107	2.	-0.726	-0.116	-0.592	89	1.007	1.484	-0.477	96
71714	108	5.	-2.954	-2.542	0.538	79	-2.371	-1.892	-0.479	97
71310	109	7.	0.828	0.251	0.569	81	-2.956	-1.892	-0.483	98
72RF8	110	7.	-1.956	-1.991	0.144	73	0.698	1.293	-0.587	99
72RR8	111	14.	-2.710	-2.309	-0.401	11	-2.545	-1.955	-0.599	100
71JCE	112	10.	-0.611	-3.153	0.543	107	-0.708	-0.116	-0.592	101
72AE8	113	10.	0.178	0.024	0.154	46	-1.870	-1.278	-0.592	102
72CC8	114	3.	-0.928	-0.852	0.924	75	-3.357	-2.742	-0.615	103
71Z98	115	9.	-3.583	-2.601	-0.982	12	-1.996	-0.464	-0.632	104
71ZD8	117	15.	-4.029	-3.661	-0.869	42	0.912	1.576	-0.664	105
65BAA	118	3.	-0.328	-0.951	0.623	119	-0.589	0.142	-0.731	106
83AF8	119	4.	-0.599	0.142	-0.731	8	-0.793	0.131	-0.834	107
83AA8	120	1.	-0.455	-0.548	0.085	82	0.865	0.923	-0.858	108
83IP1	121	4.	0.251	0.001	0.178	117	-4.529	-3.661	-0.869	109
83AA4	122	7.	-0.996	-1.101	0.105	93	-0.998	-0.899	-0.891	110
55ALP	123	4.	-0.548	-0.253	-0.295	7	-3.535	-2.601	-0.934	111
55AY8	124	8.	-0.617	0.345	-0.958	22	-3.506	-2.558	-0.948	112
81AA8	125	2.	-0.278	-0.924	0.648	124	-0.612	0.345	-0.958	113
81AE8	126	5.	-1.918	-1.297	0.280	116	-3.583	-2.601	-0.982	114
82AA8	127	3.	-1.355	-1.298	-0.057	103	0.788	1.801	-1.013	115
84211	128	11.	-0.910	-3.374	0.464	102	-0.800	0.244	-1.054	116


G&M MODEL RUN7
DEP VAR IS LLSCFD
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
SPACINGS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID


O&M MODEL RUN7
DEP VAR IS LLSCFD
RESIDUAL VS. FITTED Y
-4.195
-1.197
1.881
POSITIVE
RESIDUALS
0
NEGATIVE
-4.195
-1.197
FITTED Y
1.881

CP VALUES FOR THE SELECTION OF VARIABLES

O&M MODEL RUN7 DEP VAR 11 LLSCFO SEARCH NUMBER 1

SELECTION OF VARIABLES FOR BASIC EQUATION

CP =356.1, VARIABLE ADDED 15 LUP

CP =319.4, VARIABLE ADDED 7 EM

CP =243.8, VARIABLE ADDED 6 DI

CP =212.4, VARIABLE ADDED 2 BOMNAV

CP =132.8, VARIABLE ADDED 9 SS

CP =130.2, VARIABLE ADDED 3 BOMCOM

CP =118.8, VARIABLE ADDED 5 CD

CP = 49.3, VARIABLE ADDED 16 LVO

CP = 41.1, VARIABLE ADDED 14 DUP

CP = 28.4, VARIABLE ADDED 1 FIGCOA

CP = 30.3, VARIABLE ADDED 4 WT

NUMBER OF OBSERVATIONS 116
NUMBER OF VARIABLES IN FULL EQUATION 17
NUMBER OF VARIABLES IN BASIC EQUATION 9
REMAINDER OF VARIABLES TO BE SEARCHED 0

EQUATION	P	CP	VARIABLES IN EQUATION
	18	18.0	FULL EQUATION
	10	41.1	BASIC SET OF VARIABLES 2 BOMNAV 3 BOMCOM 5 CD 6 DI 7 EM 9 SS 14 DUP 15 LUP 16 LVO
			RMS = 0.39678
1	10	18.0	BASIC SET PLUS 1 FIGCOA 4 WT 8 XT 10 AVO 11 DVO 12 DCC 13 DPS 17 LPO
			RMS = 0.29854
2	17	18.1	BASIC SET PLUS 1 FIGCOA 4 WT 8 XT 10 AVO 12 DCC 13 DPS 17 LPO
			RMS = 0.30229

SWEEP NUMBER 255. DELTA Z(K,K) = 0.0-16

ESTIMATE OF VARIANCE

NO SMALLER RMS VALUE FOUND IN SUBSET EQUATIONS

RMS OF FULL EQUATION SELECTED BY USER TO CALCULATE CP VALUES

SEQ	EQUATION	P	ORDERED CP
1	1	10	18.0
2	2	17	18.1

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUNS DEP VAR II NRTS MIN Y = 0.0 MAX Y = 1.0000 02 RANGE Y = 1.0000 02

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPOS" MODEL
NRTS = B(0) + B(1)VO + B(2)DI + B(3)UF + B(4)MUP + B(5)MNT
+ B(6)MEM + B(7)MXT + B(8)DMT + B(9)DCC + B(10)DEM
+ B(11)DXT + B(12)LVO + B(13)LMT
NRTS = FRACTION NOT REPAIRABLE THIS STATION

IND.VAR(I)	NAME	COEF.B(I)	S.E. COEF.	T-VALUE	R(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL.INF.X(I)
0		-4.253530 01							
1	VO	3.992510-03	1.570-03	2.5	0.0376	3.6000 01	8.2000 03	8.1640 03	0.33
2	DI	1.276810-01	3.060-02	4.2	0.3566	0.0	1.0000 02	1.0000 02	0.13
3	UF	-3.072910 00	1.710 00	1.8	0.1420	3.0000-01	3.1000 00	2.8200 00	0.09
4	MUP	-2.488180-05	1.480-05	1.7	0.2774	-3.9680 04	5.2670 05	5.6630 05	0.14
5	MNT	-5.755190-01	1.070-01	5.4	0.0199	-3.2100 01	1.4000 02	1.7270 02	0.99
6	MEM	3.939420-01	4.300-02	9.2	0.2176	-0.6900 00	9.0310 01	1.0000 02	0.39
7	MXT	2.430350-01	6.870-02	3.5	0.5304	-8.5000 00	9.1500 01	1.0800 02	0.24
8	DMT	2.658910-03	9.590-04	2.8	0.0787	9.6100 00	1.1410 04	1.1400 04	0.38
9	DCC	6.613770-07	3.270-07	2.2	0.3628	8.1000 01	2.7890 07	2.7890 07	0.18
10	DEM	1.223260-02	1.830-03	6.7	0.0731	2.5910 01	3.1260 03	3.1000 03	0.38
11	DXT	4.195890-03	1.620-03	2.6	0.2753	3.0830 02	3.3060 03	3.0000 03	0.13
12	LVO	-5.782480 00	3.640 00	1.6	0.0454	3.5040 00	9.0120 00	5.4260 00	0.31
13	LMT	1.768760 01	4.410 00	4.0	0.0563	0.0	5.1570 00	5.1570 00	0.01

NO. OF OBSERVATIONS	116
NO. OF IND. VARIABLES	13
RESIDUAL DEGREES OF FREEDOM	102
F-VALUE	15.4
RESIDUAL ROOT MEAN SQUARE	10.88815978
RESIDUAL MEAN SQUARE	101.36784137
RESIDUAL SUM OF SQUARES	10339.51982815
TOTAL SUM OF SQUARES	38681.27310345
MULT. CORREL. COEF. SQUARED	.6830

REQUIRED X(I) PRECISION
(DIGIT RIGHT OF DECIMAL POSITIVE,
LEFT OF DECIMAL NEGATIVE)

IND.VAR(I)	DIGIT
1	-4
2	-2
3	1
4	-8
5	-2
6	-2
7	-2
8	-4
9	-7
10	-4
11	-4
12	1
13	1

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN8 DEP VAR IS NRTS RESIDUAL ROOT MEAN SQUARE OF FITTED EQUATION: 10.07

STANDARD DEVIATION ESTIMATED FROM RESIDUALS OF NEIGHBORING OBSERVATIONS (OBSERVATIONS 1 TO 4 APART IN FITTED Y ORDER),

NO.	CUMULATIVE STD DEV	ORDERED BY WSSD				ORDERED BY FITTED Y				
		WSSD	OBSV.	OBSV.	DEL RESIDUALS	WSSD	DEL RESIDUALS	FITTED Y	OBSV.	SEQ.
1	0.0	0.0	92	91	0.0	73.38	6.28	-15.75	26	1
2	0.10	0.0	65	64	0.40	0.92	12.71	-13.47	7	2
3	0.44	0.00	100	109	0.99	63.73	3.78	-4.77	98	3
4	1.04	0.00	93	118	3.01	38.27	7.23	-3.55	36	4
5	3.74	0.00	95	125	15.38	35.35	4.10	-1.32	112	5
6	4.44	0.00	35	6	0.39	0.53	2.64	0.58	5	6
7	4.26	0.01	81	108	3.41	0.93	0.29	1.21	60	7
8	4.25	0.06	106	124	4.46	0.12	11.35	2.92	49	8
9	4.97	0.09	47	13	11.25	0.76	0.06	3.30	72	9
10	5.49	0.11	45	81	10.78	0.00	0.99	3.38	100	10
11	6.06	0.16	80	110	21.70	10.65	2.91	3.39	109	11
12	6.59	0.16	35	97	3.82	2.94	5.60	3.48	83	12
13	7.01	0.16	85	76	23.82	0.99	0.95	5.09	8	13
14	7.07	0.18	58	53	9.11	0.0	0.40	5.33	65	14
15	7.03	0.18	97	6	4.57	1.29	2.38	5.33	64	15
16	7.04	0.27	87	59	11.64	39.99	0.31	5.51	119	16
17	7.08	0.29	43	84	5.45	15.24	3.09	5.60	74	17
18	0.78	0.32	38	46	28.89	15.53	0.20	5.69	32	18
19	0.35	0.33	38	70	0.75	2.00	0.01	5.69	102	19
20	0.11	0.35	53	68	3.68	0.77	3.62	5.70	94	20
21	0.09	0.36	19	30	0.29	0.0	0.0	5.91	92	21
22	0.44	0.39	33	87	16.66	25.83	0.00	5.91	91	22
23	0.27	0.40	93	14	4.65	31.90	0.00	5.95	77	23
24	0.39	0.43	15	13	11.70	1.21	2.13	5.95	4	24
25	0.57	0.51	110	87	13.77	7.64	7.92	6.00	85	25
26	0.20	0.53	29	90	0.41	11.76	0.00	6.15	98	26
27	0.26	0.54	92	4	0.90	4.22	11.00	6.22	121	27
28	0.27	0.54	91	4	0.90	3.07	7.03	6.23	48	28
29	0.28	0.54	60	60	0.90	2.00	12.23	6.26	1	29
30	0.10	0.56	4	121	3.17	2.01	12.50	6.40	63	30
31	0.05	0.56	14	69	0.95	0.29	5.45	6.01	43	31
32	7.90	0.56	57	24	2.22	23.37	0.05	6.06	84	32
33	7.75	0.50	54	25	1.23	26.75	10.00	7.11	79	33
34	7.69	0.60	54	02	5.90	15.01	10.10	7.30	2	34
35	7.64	0.62	60	15	0.52	35.13	1.34	7.40	73	35
36	7.60	0.64	113	02	6.35	91.35	15.00	7.74	34	36
37	7.90	0.64	30	00	23.00	62.96	0.07	7.07	51	37
30	7.05	0.66	110	31	3.10	24.66	24.17	7.90	52	30
39	0.37	0.60	46	76	20.04	0.16	3.02	0.10	35	39
40	0.21	0.60	20	71	2.45	03.91	11.93	0.34	97	40
41	0.00	0.70	60	30	3.10	52.40	14.10	0.41	101	41
42	7.92	0.73	14	60	2.97	2.30	0.02	0.50	20	42
43	0.73	0.73	50	105	13.70	17.56	0.02	0.77	0	43
44	0.21	0.74	07	31	10.00	0.50	10.00	0.05	66	44
45	0.17	0.75	5	49	0.66	0.01	3.07	0.04	71	45
46	0.01	0.75	15	47	0.53	15.02	13.06	0.07	27	46
47	7.05	0.76	72	109	0.91	45.36	13.10	0.11	70	47
40	7.00	0.70	72	100	0.00	32.06	2.03	0.21	126	40
49	7.00	0.76	30	114	7.30	0.72	2.01	0.24	02	49
50	7.00	0.77	04	01	3.02	4.23	4.41	0.33	29	50
01	7.01	0.77	04	02	3.02	0.04	4.00	0.54	120	51
52	7.40	0.77	125	110	1.40	2.72	0.41	0.74	00	52
53	7.50	0.70	05	110	13.02	30.30	0.22	0.05	03	53
54	7.41	0.70	110	04	2.01	20.00	0.11	0.04	70	54
55	7.30	0.00	40	43	0.50	0.05	2.00	10.04	33	55
56	7.20	0.00	10	111	1.72	11.45	0.00	10.10	110	56

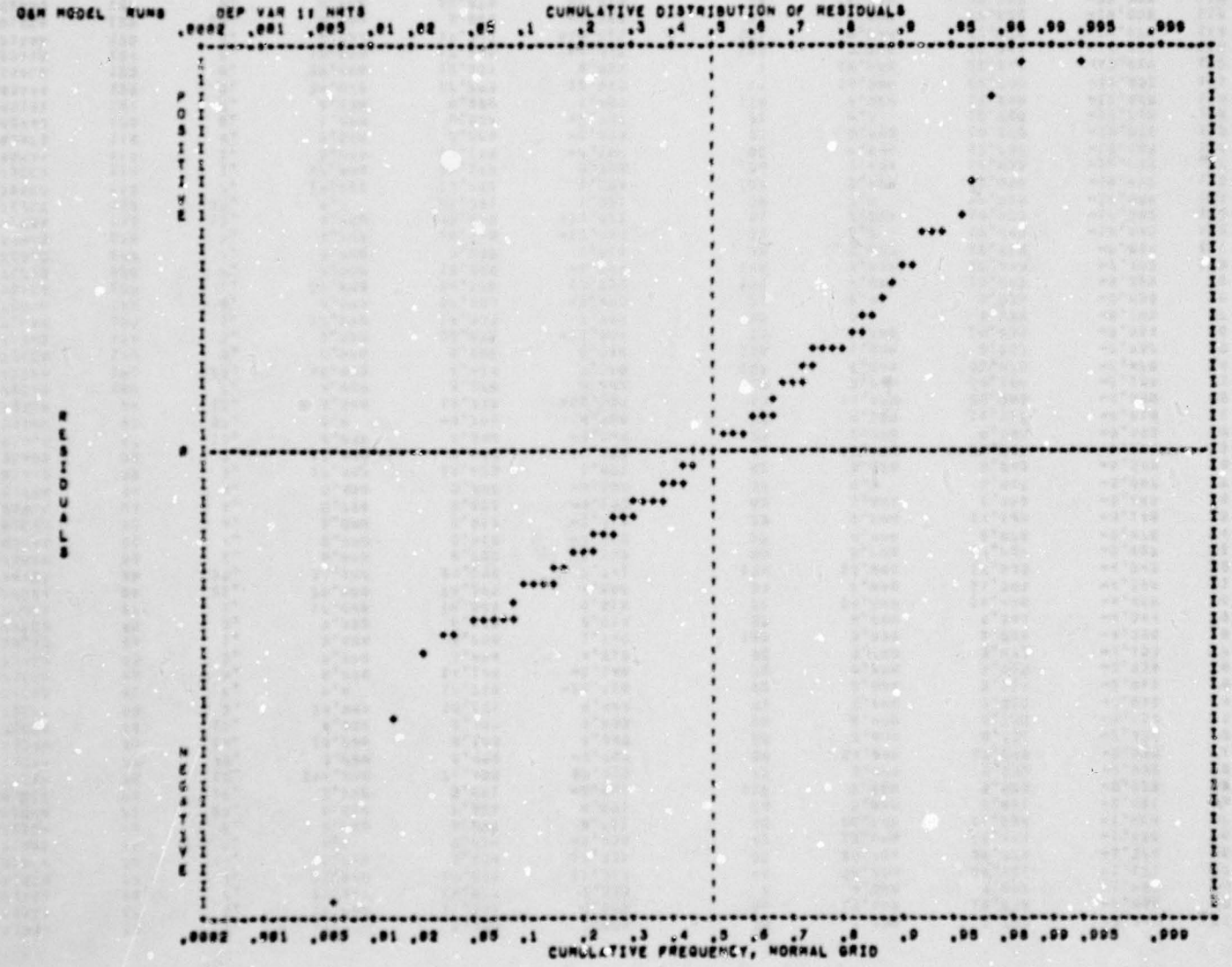
57	7.46	0.83	69	13	18.38	3.98	6.99	18.38	11	57
58	7.62	0.83	39	67	17.58	19.99	0.08	18.38	58	58
59	7.53	0.84	68	15	2.45	0.74	16.88	18.39	67	59
60	7.53	0.84	88	95	7.78	3.45	0.37	18.56	31	60
61	7.51	0.84	82	25	7.13	3.89	5.81	18.64	39	61
62	7.75	0.84	88	125	23.16	5.38	1.79	11.93	59	62
63	7.65	0.85	27	29	1.74	15.86	13.68	11.12	57	63
64	7.66	0.89	45	104	8.72	3.87	1.33	11.13	67	64
65	7.56	0.90	53	10	1.42	4.43	10.13	11.46	12	65
66	7.63	0.92	7	98	12.71	18.36	2.66	11.69	24	66
67	7.68	0.93	93	33	5.89	2.68	7.58	11.93	45	67
68	7.53	0.95	33	118	2.88	4.65	1.13	12.52	56	68
69	7.58	0.96	48	84	12.93	1.26	2.87	12.65	104	69
70	7.52	0.96	104	127	3.17	2.57	0.56	12.72	81	70
71	7.44	0.97	114	47	2.46	2.74	2.83	12.74	99	71
72	7.58	0.97	43	2	12.59	3.88	1.83	13.31	106	72
73	7.47	0.98	38	15	5.65	14.87	8.69	13.48	127	73
74	7.48	1.01	14	39	2.22	2.25	12.25	13.79	113	74
75	7.44	1.02	59	12	18.55	8.89	5.98	14.04	54	75
76	7.65	1.10	125	122	27.26	8.84	7.13	14.14	82	76
77	7.48	1.13	84	2	17.96	1.37	14.94	14.27	25	77
78	7.74	1.13	2	52	3.69	1.36	12.56	14.33	105	78
79	7.71	1.15	31	59	5.24	4.51	6.37	14.76	107	79
80	7.69	1.15	92	85	6.83	8.84	7.78	15.15	80	80
81	7.68	1.15	91	85	6.83	9.88	15.38	15.93	95	81
82	7.59	1.15	85	121	1.83	11.19	6.48	16.31	125	82
83	7.52	1.15	104	108	1.34	9.79	5.82	16.83	55	83
84	7.47	1.16	128	93	3.56	128.52	18.99	16.85	118	84
85	7.45	1.17	48	88	5.82	132.88	14.88	16.86	42	85
86	7.46	1.21	13	9	9.36	3.64	18.83	17.86	122	86
87	7.48	1.21	4	85	2.13	3.56	8.31	17.89	58	87
88	7.34	1.26	104	81	2.87	8.86	4.46	17.48	106	88
89	7.32	1.29	88	27	8.12	4.82	18.96	17.95	124	89
90	7.27	1.29	65	119	2.78	88.46	17.58	17.99	53	90
91	7.21	1.29	64	119	2.38	71.43	11.91	18.48	61	91
92	7.28	1.32	114	13	13.71	2.87	8.87	18.57	19	92
93	7.25	1.34	94	4	5.34	8.73	8.97	18.64	14	93
94	7.28	1.35	15	9	2.42	8.78	3.19	18.67	68	94
95	7.25	1.36	105	107	12.56	3.84	18.52	18.86	38	95
96	7.32	1.37	25	105	14.94	8.97	1.65	19.34	123	96
97	7.31	1.38	89	47	7.85	8.62	8.52	19.89	89	97
98	7.29	1.45	123	114	2.94	3.11	1.93	20.21	15	98
99	7.27	1.46	49	83	7.57	8.97	2.46	20.28	114	99
100	7.25	1.56	28	3	8.48	8.89	11.25	20.74	47	100
101	7.27	1.65	89	37	9.11	1.21	9.36	20.99	13	101
102	7.24	1.68	19	69	5.10	9.57	15.32	22.63	9	102
103	7.19	1.69	47	9	1.89	8.88	1.72	22.95	18	103
104	7.36	1.78	119	122	25.79	58.11	22.42	23.68	114	104
105	7.33	1.73	71	125	4.82	28.81	14.81	25.26	69	105
106	7.37	1.74	38	69	12.17	15.11	4.80	25.27	41	106
107	7.37	1.79	82	105	7.81	38.22	2.98	26.37	37	107
108	7.34	1.81	98	1	4.89	24.94	21.28	27.41	18	108
109	7.29	1.82	29	93	8.82	15.45	32.78	27.69	28	109
110	7.28	1.82	98	33	6.38	13.88	26.38	28.91	48	110
111	7.35	1.87	87	39	17.25	33.95	28.51	29.22	3	111
112	7.37	1.89	79	58	18.83	51.88	61.49	43.72	44	112
113	7.35	1.91	101	43	5.31	8.32	28.89	65.23	38	113
114	7.29	2.00	102	94	8.81	1.17	5.82	66.12	46	114
115	7.29	2.01	63	84	7.23	8.18	23.82	70.31	88	115
116	7.33	2.01	63	43	12.68	83.40	28.99	71.48	78	116

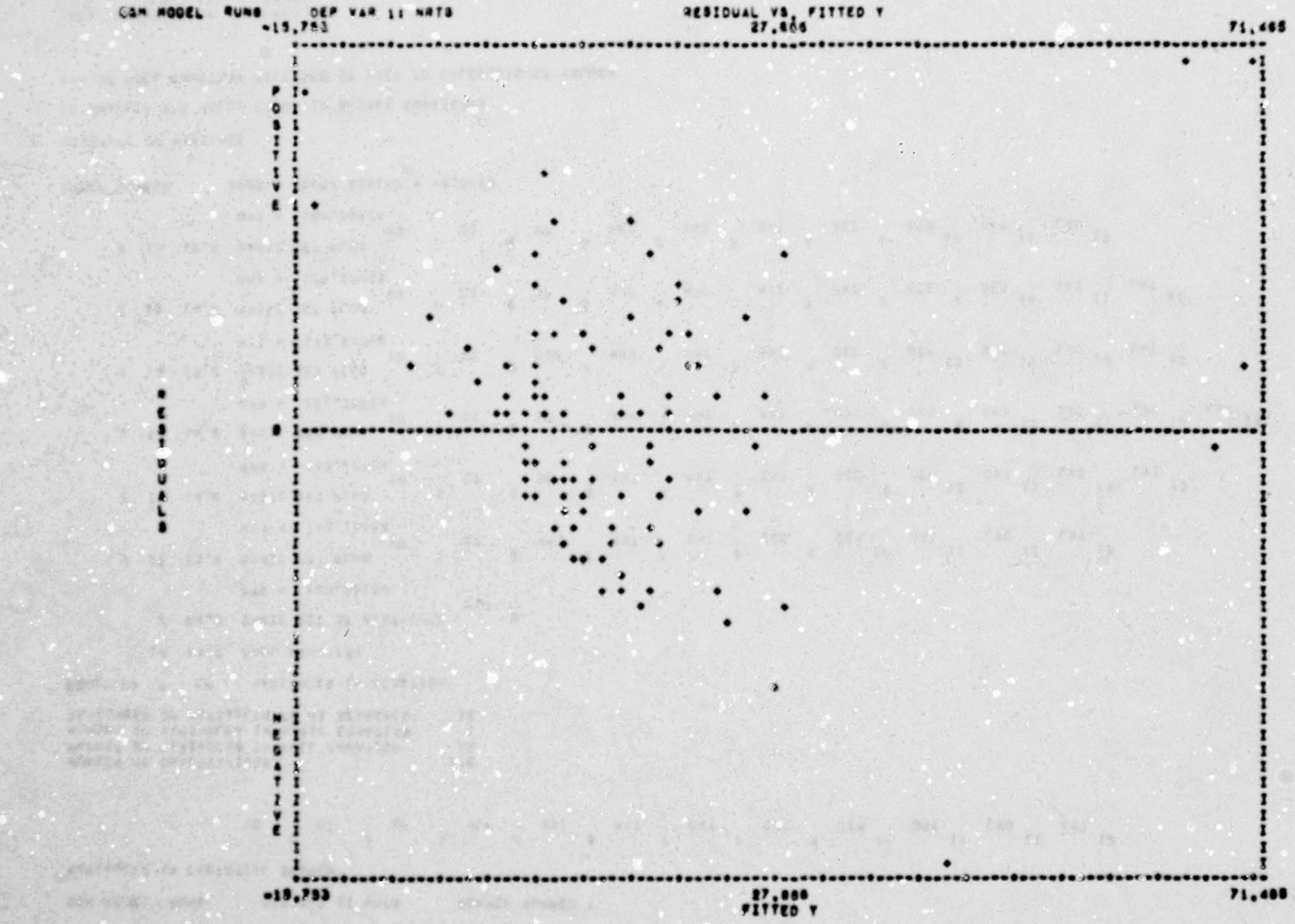
LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

C&M MODEL RUN8 DEP VAR 21 NRTS

IDENT.	OBSV.	NSS DISTANCE	OBS. Y	FITTED Y	RESIDUAL	OBSV.	OBS. Y	FITTED Y	ORDERED RESID.	SEQ
71823	1	3.	13,888	6,257	6,743	76	122,888	71,485	28,515	1
71L98	2	2.	27,888	7,383	19,697	38	93,888	65,238	27,778	2
71M9P	3	8.	16,888	28,216	-13,216	26	18,888	-15,753	25,753	3
71PK8	4	2.	11,888	5,952	5,948	2	27,888	7,383	19,697	4
71P88	5	2.	6,888	8,577	5,423	7	4,888	-13,472	17,472	5
71718	6	14.	9,888	8,778	8,238	52	24,888	7,994	16,886	6
724G8	7	36.	4,888	-13,472	17,472	107	38,888	14,778	15,922	7
71958	8	3.	4,888	5,887	-1,887	51	23,888	7,887	15,133	8
71FA8	9	3.	25,888	22,629	2,371	48	28,888	8,228	13,774	9
71F98	10	18.	10,888	22,952	-12,952	48	42,888	28,913	13,887	10
71CA8	11	0.	18,888	18,298	-8,298	122	38,888	17,855	12,945	11
71D48	12	1.	17,888	11,464	5,536	48	15,888	2,918	12,882	12
71EA8	13	2.	14,888	28,989	-6,989	89	31,888	19,686	11,314	13
724A8	14	4.	28,888	18,639	1,361	96	17,888	6,164	10,836	14
72488	15	4.	25,888	28,289	4,791	123	29,888	19,337	9,663	15
74JA8	16	8.	29,888	27,413	1,587	78	18,888	9,185	8,895	16
74JC8	19	2.	26,888	18,569	7,431	88	24,888	15,151	8,849	17
92GA1	20	7.	2,888	8,592	-8,592	36	5,888	-3,558	8,558	18
73EG8	24	4.	7,888	11,598	-4,598	89	33,888	25,259	7,741	19
73EP8	25	3.	2,888	14,272	-12,272	101	16,888	8,414	7,586	20
73MA8	26	12.	18,888	-15,753	25,753	19	26,888	18,569	7,431	21
73MC8	27	1.	4,888	9,878	-5,878	43	14,888	8,887	7,193	22
73NA8	28	11.	8,888	27,692	-19,692	67	16,888	11,031	6,869	23
73088	29	1.	6,888	9,331	-3,331	1	13,888	6,257	6,743	24
738C8	30	2.	18,888	18,858	-8,858	114	27,888	20,277	6,723	25
73K8J	31	1.	8,388	18,562	-18,262	58	17,888	10,384	6,696	26
73KE8	32	1.	8,8	5,887	-5,887	87	17,888	10,385	6,615	27
73KF8	33	1.	8,8	18,843	-18,843	53	24,888	17,985	6,915	28
73KK8	34	2.	7,888	7,742	-8,742	12	17,888	11,464	5,536	29
7593G	35	14.	8,8	8,185	-8,185	5	8,888	8,577	5,423	30
748D8	36	8.	5,888	-3,958	8,958	4	11,888	5,952	5,948	31
748F8	37	18.	25,888	26,374	-1,374	15	25,888	28,289	4,791	32
74A18	38	19.	93,888	65,238	27,778	98	8,8	-4,766	4,766	33
78A18	39	2.	8,8	18,636	-18,636	88	75,888	72,395	4,695	34
78GA8	48	2.	42,888	28,913	13,887	83	8,888	3,484	4,516	35
74FF8	41	5.	19,888	25,268	-6,268	47	25,888	22,738	4,264	36
74FA8	42	93.	15,888	16,888	-1,888	85	9,888	6,986	2,914	37
74FH8	43	1.	14,888	6,887	7,193	82	4,888	1,213	2,787	38
74FU8	44	44.	18,888	43,722	-33,722	105	17,888	14,333	2,667	39
73CR8	45	6.	10,888	11,934	-1,934	9	25,888	22,629	2,371	40
73CG8	46	18.	67,888	68,121	-1,121	68	21,888	18,667	2,333	41
658H8	47	2.	25,888	28,736	4,264	121	8,188	6,228	1,888	42
74FC8	48	1.	28,888	8,228	13,774	84	8,688	6,858	1,742	43
74FJ8	49	1.	15,888	2,918	12,882	109	5,888	3,389	1,611	44
74FK8	50	17.	17,888	18,384	8,696	18	29,888	27,413	1,587	45
74F08	51	71.	23,888	7,887	15,103	14	28,888	18,639	1,361	46
74KA8	52	2.	24,888	7,994	16,886	112	8,8	-1,321	1,321	47
74KC8	53	2.	24,888	17,985	6,815	113	15,888	13,792	1,288	48
74C98	54	2.	3,888	14,938	-11,938	95	17,888	15,929	1,871	49
74C84	55	3.	9,888	16,833	-7,833	66	18,888	8,945	1,955	50
74CC8	56	11.	3,888	12,518	-9,518	79	8,888	7,107	8,893	51
74FA1	57	6.	4,378	11,116	-6,816	72	4,888	3,299	8,781	52
74E83	58	2.	14,888	17,998	-3,398	108	4,888	3,376	8,624	53
73PH8	59	1.	8,888	11,827	-5,827	73	8,888	7,399	8,681	54
73P88	60	7.	4,888	1,213	2,787	102	8,888	8,698	8,318	55
73PD8	61	61.	14,888	18,488	-4,488	8	9,888	8,778	8,238	56
73PF8	62	5.	3,888	9,248	-6,248	65	5,288	5,332	-8,132	57
73PH8	63	2.	1,888	6,489	-5,489	94	5,488	5,697	-8,297	58
71NA8	64	2.	4,888	5,332	-8,532	11	18,888	18,298	-8,298	59
71QU8	65	2.	5,288	5,332	-8,132	64	4,888	5,332	-8,532	60

63AA0	86	1.	12,000	8,945	1,055	34	7,000	7,742	-0,742	81
65A40	87	3.	10,000	11,131	0,869	30	10,000	10,858	-0,858	82
63AG0	88	2.	21,000	18,667	2,333	8	4,000	5,087	-1,087	83
638C0	89	4.	31,000	19,686	11,314	46	67,000	68,121	-1,121	84
638F0	70	24.	0,000	9,938	-9,938	37	25,000	26,374	-1,374	85
7148E	71	7.	0,0	9,938	-9,938	42	15,000	16,868	-1,868	86
714DA	72	6.	4,000	3,299	0,701	45	10,000	11,934	-1,934	87
7308A	73	23.	0,000	7,399	0,601	74	3,000	5,601	-2,601	88
714CC	74	19.	3,000	5,601	-2,601	119	2,000	5,500	-2,988	89
73CEN	76	19.	100,000	71,485	28,515	77	3,000	5,952	-2,952	70
73CF4	77	42.	3,000	5,952	-2,952	58	14,000	17,898	-3,898	71
730AM	78	14.	18,000	9,105	8,895	29	6,000	9,331	-3,331	72
73E8A	79	15.	8,000	7,197	0,893	90	6,000	9,739	-3,739	73
73E6F	80	3.	24,000	15,151	8,849	91	2,000	5,912	-3,912	74
71C40	81	7.	0,0	12,716	-12,716	92	2,000	5,912	-3,912	75
73EG0	82	4.	9,000	14,148	-5,148	78	6,000	9,938	-3,938	76
73MC0	83	3.	0,000	3,484	4,516	93	5,700	9,853	-4,153	77
73LA0	84	1.	8,000	6,858	1,742	100	5,000	9,288	-4,288	78
72EC0	85	3.	9,000	6,086	2,914	97	4,000	8,344	-4,344	79
770CA	87	1.	17,000	10,385	6,615	81	14,000	18,488	-4,488	80
770C0	88	21.	75,000	70,385	4,695	24	7,000	11,598	-4,598	81
76AEA	89	25.	33,000	25,259	7,741	124	13,000	17,945	-4,945	82
73K40	90	2.	0,000	9,739	-9,739	59	6,000	11,927	-5,927	83
638A4	91	4.	2,000	5,912	-3,912	27	4,000	9,078	-5,078	84
63CAA	92	4.	2,000	5,912	-3,912	82	9,000	14,148	-5,148	85
659AA	93	1.	5,700	9,853	-4,153	63	1,000	6,489	-5,489	86
6189A	94	4.	5,400	5,697	-0,297	32	0,0	5,687	-5,687	87
61AA0	95	3.	17,000	15,929	1,071	62	3,000	9,248	-6,248	88
61A80	96	5.	37,000	6,164	10,836	41	19,000	25,268	-6,268	89
61AC0	97	13.	4,000	8,344	-4,344	28	2,000	8,592	-6,592	90
72AA0	98	37.	0,0	-4,766	4,766	57	4,300	11,116	-6,816	91
72AC0	99	15.	0,600	12,738	-12,138	13	14,000	20,939	-6,939	92
71CA0	100	7.	6,000	3,376	0,624	118	3,000	10,168	-7,168	93
72EAA	101	22.	16,000	8,414	7,586	127	6,000	13,478	-7,478	94
72EC4	102	9.	0,000	5,690	0,310	120	1,600	9,537	-7,937	95
71JA0	104	3.	2,000	12,658	-10,658	55	9,000	16,833	-7,033	96
71LA0	105	1.	17,000	14,333	2,667	35	0,0	8,185	-8,185	97
720N0	106	2.	0,000	17,403	-9,403	71	0,0	9,938	-9,938	98
72AC0	107	1.	30,000	14,778	15,222	108	4,000	13,309	-9,309	99
71710	108	7.	4,000	13,309	-9,309	106	0,000	17,403	-9,403	100
71310	109	7.	5,000	3,389	1,611	56	3,000	12,518	-9,518	101
72AF0	110	3.	4,000	16,848	-12,848	33	0,0	10,843	-10,843	102
72A90	111	12.	9,000	23,678	-14,678	31	0,300	10,562	-10,262	103
71JCE	112	99.	0,0	-1,321	1,321	39	0,0	10,636	-10,636	104
724E0	113	7.	15,000	13,792	1,208	104	2,000	12,650	-10,650	105
72CC0	114	1.	27,000	22,277	0,723	54	3,000	14,938	-11,938	106
659AA	115	1.	3,000	10,168	-7,168	99	0,000	12,736	-12,136	107
63AF0	119	4.	2,600	5,588	-2,988	25	2,000	14,272	-12,272	108
63AA0	120	2.	1,000	9,537	-7,937	81	0,0	12,716	-12,716	109
63121	121	4.	0,100	6,220	1,880	110	4,000	16,848	-12,848	110
63AAA	122	0.	30,000	17,955	12,945	10	10,000	22,952	-12,952	111
59AL0	123	2.	20,000	19,337	0,663	3	16,000	29,216	-13,216	112
59AV0	124	2.	13,000	17,945	-4,945	125	2,000	16,311	-14,311	113
61AA0	125	3.	2,000	16,311	-14,311	111	9,000	23,676	-14,676	114
61AE0	126	13.	5,000	9,288	-4,288	28	0,000	27,692	-19,692	115
62AA0	127	8.	0,000	13,478	-7,478	44	10,000	43,728	-33,728	116


O&M MODEL RUNS
DEP VAR 11 HHTS
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
STANDARDIZED RESIDUAL
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID


CSM MODEL RUNS DEP VAR 11 NATS
RESIDUAL VS. FITTED Y
-19,793
27,888
71,468
POSITIVE
RESIDUALS
0
NEGATIVE
-19,793
27,888
71,468
FITTED Y

CP VALUES FOR THE SELECTION OF VARIABLES

G&M MODEL RUN8 DEP VAR IS MPTG SEARCH NUMBER 1

VARIABLES IN FACTORIAL SEARCH

1	2	3	4	5	6	7	8	9	10	11	12	13
VO	DI	UP	RUP	RWT	RXT	DWT	DCC	DZM	DXT	LVO	LWT	

NUMBER OF OBSERVATIONS 116
NUMBER OF VARIABLES IN FULL EQUATION 13
NUMBER OF VARIABLES IN BASIC EQUATION 1
REMAINDER OF VARIABLES TO BE SEARCHED 12

EQUATION	P	CP	VARIABLES IN EQUATION
14	14	14.0	FULL EQUATION
2	2	99.8	BASIC SET OF VARIABLES RBW 6
			RMS = 188.52178
1	12	13.8	BASIC SET PLUS VO 1 DI 2 RWT 5 RXT 7 DWT 8 DCC 9 DZM 10 DXT 11 LVO 12 LWT 13
			RMS = 185.15284
2	13	14.6	BASIC SET PLUS VO 1 DI 2 UP 3 RWT 5 RXT 7 DWT 8 DCC 9 DZM 10 DXT 11 LVO 12 LWT 13
			RMS = 183.17564
3	14	14.0	BASIC SET PLUS VO 1 DI 2 UP 3 RUP 4 RWT 5 RXT 7 DWT 8 DCC 9 DZM 10 DXT 11 LVO 12 LWT 13
			RMS = 181.36784
4	13	15.2	BASIC SET PLUS VO 1 DI 2 RUP 4 RWT 5 RXT 7 DWT 8 DCC 9 DZM 10 DXT 11 LVO 12 LWT 13
			RMS = 183.54719
5	13	14.5	BASIC SET PLUS VO 1 DI 2 UP 3 RUP 4 RWT 5 RXT 7 DWT 8 DCC 9 DZM 10 DXT 11 LWT 13
			RMS = 182.87923
6	12	15.8	BASIC SET PLUS VO 1 DI 2 UP 3 RWT 5 RXT 7 DWT 8 DCC 9 DZM 10 DXT 11 LWT 13
			RMS = 184.88749

SWEEP NUMBER 4038, DELTA Z(K,K) = +2.0-10

ESTIMATE OF VARIANCE

NO SMALLER RMS VALUE FOUND IN SUBSET EQUATIONS

RMS OF FULL EQUATION SELECTED BY USER TO CALCULATE CP VALUES

DEG	EQUATION	P	ORDERED CP
1	3	14	14.0
2	5	13	14.5
3	2	13	14.6
4	4	13	15.2
5	6	12	15.8
6	1	12	16.0

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN0 DEP VAR IS LSPA MIN Y = 4.2830 00 MAX Y = 1.1340 01 RANGE Y = 7.0750 00

MULTIPLE REGRESSION ANALYSIS FOR THE 'ALPOS' MODEL
LSPA = B(0) + B(1)FIGSEN + B(2)FIGCOM + B(3)BOMNAV + B(4)BOMSEN
+ B(5)CARNAV + B(6)DI + B(7)DUP + B(8)DVO + B(9)DNT
+ B(10)DCC + B(11)DEM + B(12)DPS + B(13)LUP + B(14)LCC
LSPA = LN(SPA)
SPA = STANDARD DEPOT REPAIR COST

IND,VAR(I)	NAME	COEF,B(I)	S.E. COEF.	T-VALUE	B(I)BOMB	MIN X(I)	MAX X(I)	RANGE X(I)	REL.IMP.X(I)
0		-2.877780-01							
1	FIGSEN	+8.775650-01	1.470-01	4.8	0.3488	0.0	5.0000 00	1.0000 00	0.10
2	FIGCOM	-5.427110-01	2.280-01	2.4	0.0713	0.0	1.0000 00	1.0000 00	0.09
3	BOMNAV	+2.643180-01	2.530-01	1.7	0.1078	0.0	1.0000 00	1.0000 00	0.04
4	BOMSEN	3.759710-01	2.890-01	1.4	0.1164	0.0	1.0000 00	1.0000 00	0.05
5	CARNAV	-2.782940-01	1.480-01	2.0	0.2124	0.0	1.0000 00	1.0000 00	0.04
6	DI	3.792780-03	1.520-03	2.5	0.3113	0.0	1.0000 02	1.0000 02	0.05
7	DUP	-1.612790-11	3.790-12	4.3	0.2816	2.0550 08	1.3500 11	1.3480 11	0.31
8	DVO	8.559840-06	1.950-06	4.2	0.4542	1.0200 04	2.4220 07	2.4210 07	0.23
9	DNT	-2.773770-04	3.460-05	8.0	0.4497	0.0000 00	1.1000 04	1.1000 04	0.45
10	DCC	9.320450-08	1.590-08	5.9	0.3856	1.0000 02	3.1010 07	3.1010 07	0.41
11	DEM	3.683610-04	1.070-04	3.4	0.0429	9.3400 01	3.2040 03	3.2310 03	0.17
12	DPS	9.197160-04	1.390-04	6.6	0.2241	1.0440 02	2.6280 03	2.7240 03	0.29
13	LUP	5.594460-01	4.840-02	13.0	0.5185	5.8300 00	1.3250 01	8.2170 00	0.65
14	LCC	1.047660-01	4.490-02	2.3	0.4048	2.4090 00	9.0240 00	6.5380 00	0.10

NO. OF OBSERVATIONS	106
NO. OF IND. VARIABLES	14
RESIDUAL DEGREES OF FREEDOM	91
F-VALUE	48.3
RESIDUAL ROOT MEAN SQUARE	0.47959831
RESIDUAL MEAN SQUARE	0.23000887
RESIDUAL SUM OF SQUARES	21.39083870
TOTAL SUM OF SQUARES	178.03277501
MULT. CORREL. COEF. SQUARED	.8748

REQUIRED X(I) PRECISION
(DIGITS RIGHT OF DECIMAL POSITIVE,
LEFT OF DECIMAL NEGATIVE)

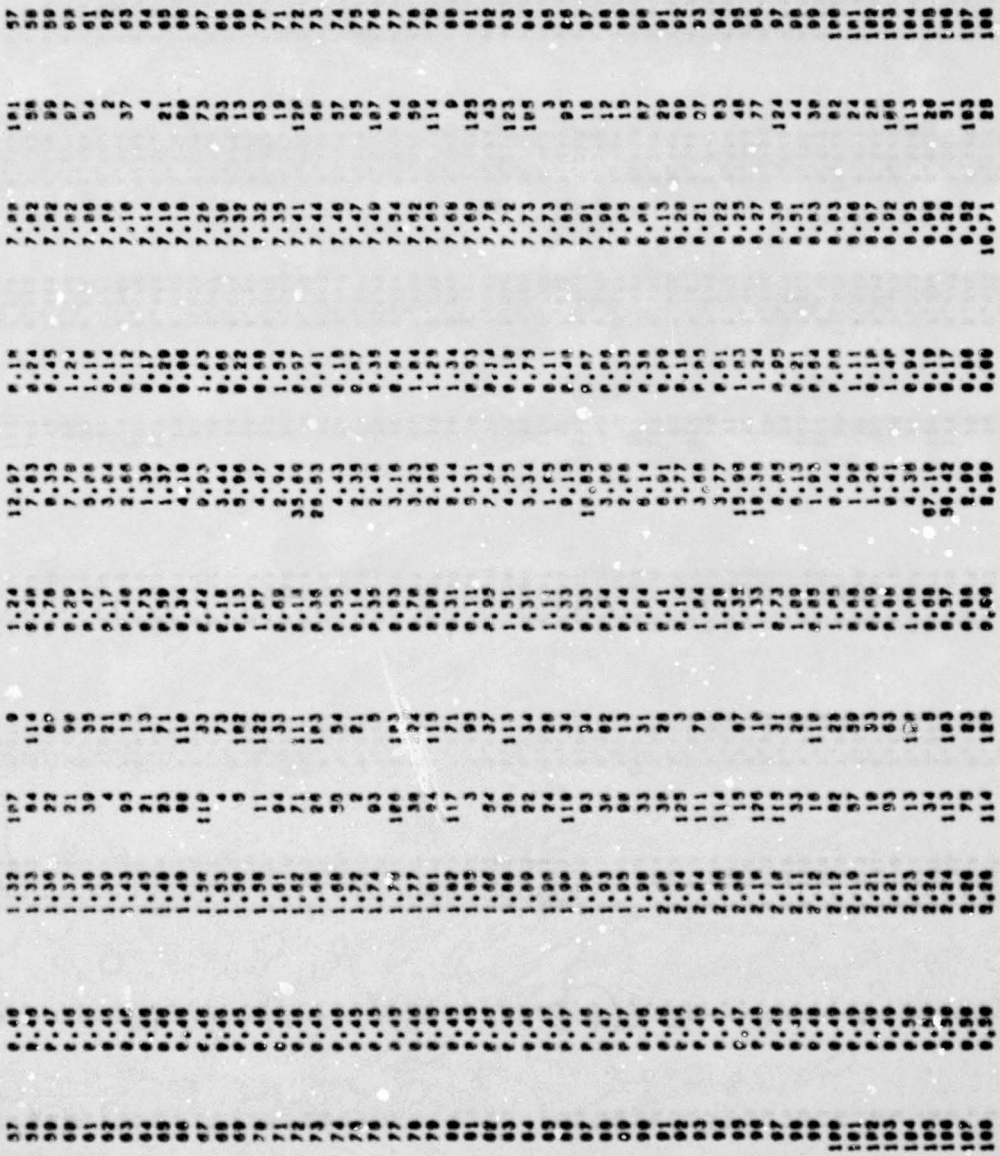
IND,VAR(I)	DIGIT
1	-1
2	-1
3	-1
4	-1
5	-1
6	-2
7	-11
8	-7
9	-4
10	-7
11	-4
12	-4
13	-1
14	1

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

BSR MODEL RUN9 DEP VAR IS LSRA RESIDUAL ROOT MEAN SQUARE OF FITTED EQUATION: 0.48

STANDARD DEVIATION ESTIMATED FROM RESIDUALS OF NEIGHBORING OBSERVATIONS (OBSERVATIONS 1 TO 4 APART IN FITTED Y ORDER).

NO.	CUMULATIVE STD DEV	ORDERED BY WSSD				ORDERED BY FITTED Y					
		WSSD	OBSV.	OBSV.	DEL	RESIDUALS	WSSD	DEL	RESIDUALS	FITTED Y	OBSV.	DEG.
1	0.55	0.0	121	91		0.69	0.04		0.04	4.12	79	1
2	0.33	0.0	92	91		0.0	2.65		0.69	4.18	74	2
3	0.44	0.0	121	92		0.69	0.33		0.25	4.44	117	3
4	0.33	0.0	85	94		0.0	1.48		0.59	5.12	23	4
5	0.28	0.0	110	93		0.0	1.10		0.11	5.22	71	5
6	0.29	0.00	91	119		0.23	2.64		0.21	5.29	6	6
7	0.29	0.04	100	100		0.24	4.06		0.28	5.33	111	7
8	0.23	0.04	75	74		0.04	5.62		0.53	5.35	78	8
9	0.28	0.05	6	120		0.54	0.69		1.36	5.37	100	9
10	0.26	0.11	2	4		0.02	5.46		0.83	5.44	79	10
11	0.22	0.19	81	80		0.11	4.72		0.07	5.48	47	11
12	0.23	0.21	119	94		0.25	3.76		0.24	5.48	120	12
13	0.21	0.29	102	100		0.09	1.36		0.47	5.50	39	13
14	0.22	0.33	117	23		0.20	44.97		0.00	5.52	35	14
15	0.23	0.35	95	97		0.45	49.34		0.50	5.54	42	15
16	0.23	0.37	59	43		0.17	0.05		0.43	5.56	112	16
17	0.29	0.41	100	113		1.48	5.38		1.22	5.68	110	17
18	0.29	0.44	92	24		0.06	3.70		0.17	5.70	90	18
19	0.33	0.44	0	125		1.34	0.06		0.11	5.70	7	19
20	0.35	0.55	23	0		0.70	4.39		0.69	5.70	81	20
21	0.36	0.56	20	99		0.57	0.0		0.0	5.84	110	21
22	0.35	0.59	0	12		0.22	5.84		0.02	5.94	93	22
23	0.33	0.64	100	72		0.00	1.36		0.76	5.98	22	23
24	0.33	0.66	7	91		0.11	2.32		1.09	5.98	60	24
25	0.33	0.66	24	113		0.48	2.24		0.06	6.00	34	25
26	0.33	0.66	72	100		0.15	5.40		0.02	6.01	5	26
27	0.36	0.69	120	79		1.36	2.12		2.05	6.08	10	27
28	0.36	0.76	87	89		0.20	0.53		0.71	6.10	110	28
29	0.37	0.76	91	22		0.67	4.75		0.64	6.11	70	29
30	0.38	0.77	79	100		0.75	4.00		0.31	6.15	102	30
31	0.39	0.83	120	100		0.02	0.0		0.0	6.21	65	31
32	0.39	0.84	71	120		0.43	3.01		2.00	6.21	64	32
33	0.42	0.86	120	65		1.56	2.00		0.07	6.26	127	33
34	0.42	0.86	47	39		0.31	0.64		0.00	6.30	100	34
35	0.43	0.87	7	22		0.78	4.74		0.03	6.31	72	35
36	0.44	0.88	0	79		0.04	3.78		1.07	6.32	104	36
37	0.44	0.88	80	10		0.39	7.23		0.23	6.40	100	37
38	0.42	0.89	122	120		0.03	0.30		0.05	6.44	78	38
39	0.42	0.89	107	0		0.42	0.48		0.48	6.45	38	39
40	0.42	0.90	82	113		0.48	2.00		1.07	6.48	60	40
41	0.44	0.90	24	100		1.00	5.42		0.02	6.57	11	41
42	0.46	0.90	120	107		1.50	0.0		0.60	6.67	121	42
43	0.45	1.00	127	104		0.10	0.0		0.0	6.67	92	43
44	0.46	1.01	82	100		0.04	4.30		0.40	6.67	91	44
45	0.46	1.05	95	12		0.33	0.00		0.03	6.67	122	45
46	0.46	1.07	13	10		0.46	4.00		0.00	6.67	120	46
47	0.47	1.00	110	81		0.05	4.25		0.12	6.68	60	47
48	0.46	1.10	71	0		0.11	0.43		1.12	6.70	110	48
49	0.46	1.16	20	27		0.25	4.91		0.24	6.71	10	49
50	0.45	1.17	107	114		0.04	0.01		1.14	6.74	50	50
51	0.44	1.10	27	124		0.70	1.01		0.00	6.83	94	51
52	0.47	1.20	110	7		1.05	20.10		0.06	6.86	33	52
53	0.46	1.21	22	10		0.30	23.40		0.03	6.87	01	53
54	0.48	1.24	35	50		0.20	3.27		0.40	6.88	115	54
55	0.46	1.25	30	100		0.30	3.40		1.15	6.92	20	55
56	0.45	1.20	00	100		0.10	4.00		0.42	6.90	31	56



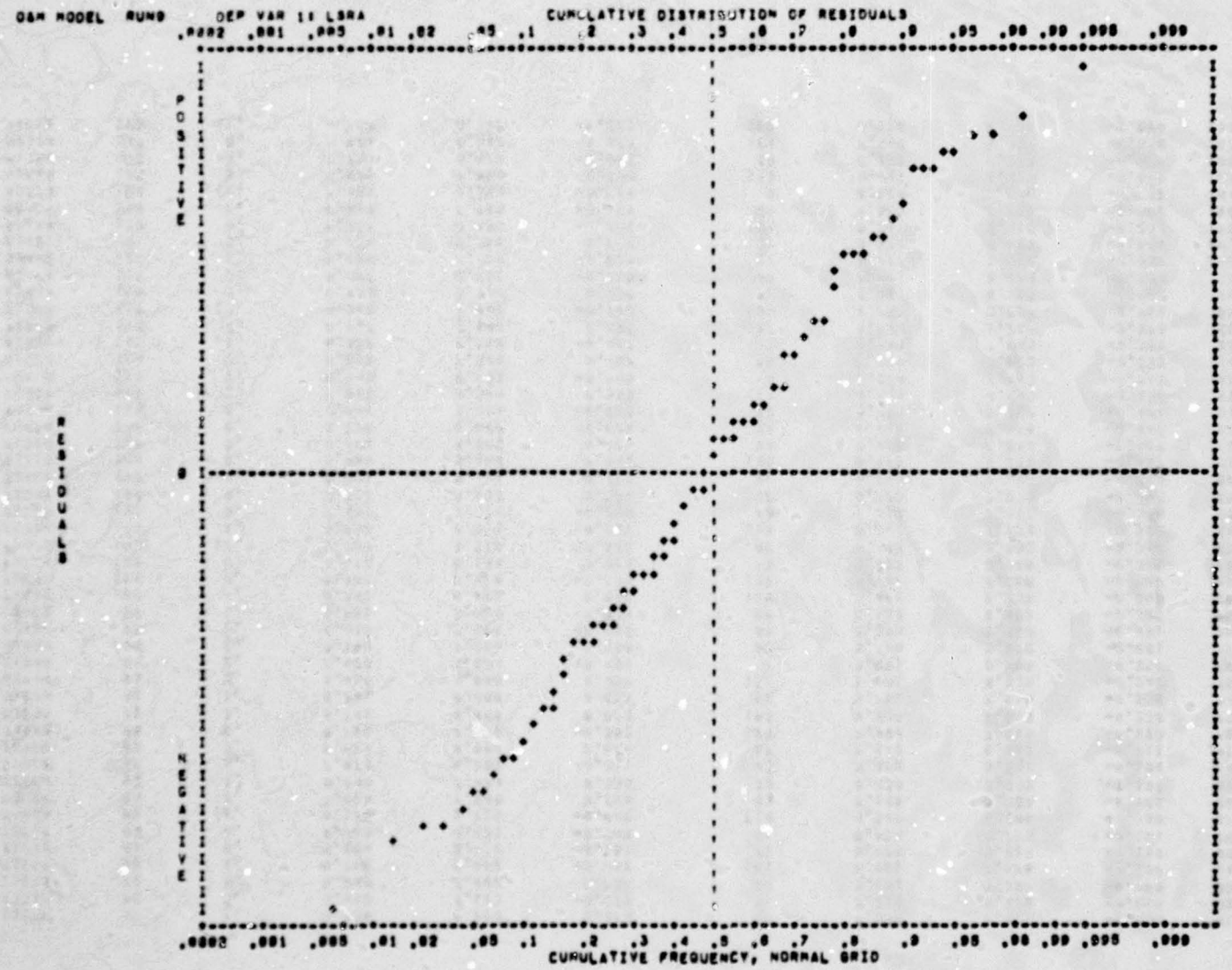
LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

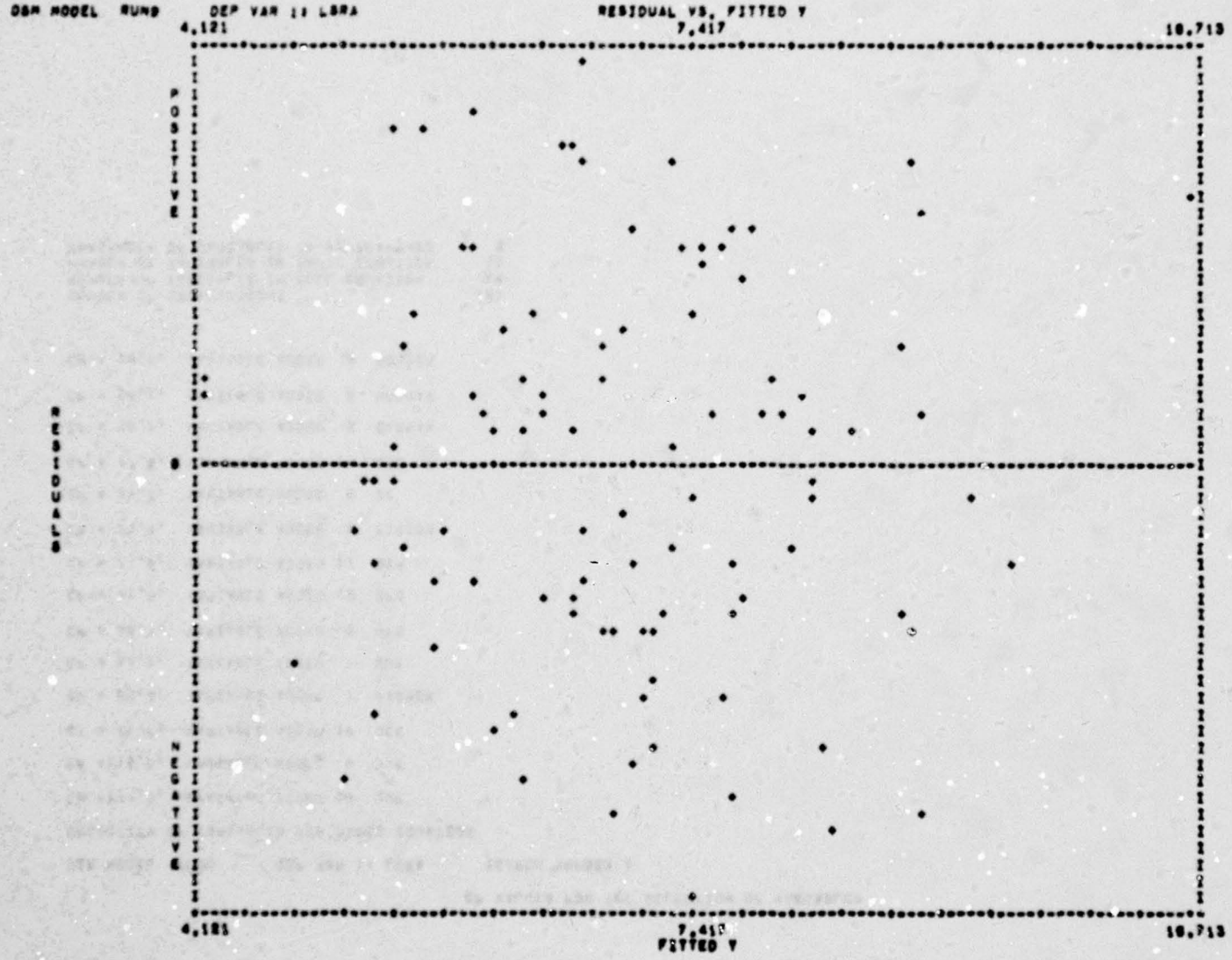
O&M MODEL RUN8 DEP VAR IS LSR4

IDENT.	OBSV.	MSS DISTANCE	ORDERED BY COMPUTER INPUT OBS. Y	FITTED Y	RESIDUAL
71LBA	2	1.	8.545	7.785	-P.339
71MBA	3	3.	8.157	7.734	P.423
71PKA	4	1.	8.628	7.143	-P.515
71PBA	5	5.	8.153	8.997	P.146
71710	6	11.	5.252	5.289	-P.037
724GA	7	6.	5.581	5.760	-P.259
71FAA	9	1.	8.998	7.879	-P.772
71FBA	10	2.	7.691	6.714	P.967
71CAA	11	2.	7.313	6.578	P.743
71DAA	12	3.	8.178	7.975	P.201
51EAA	13	1.	7.368	7.328	P.P48
52A5A	15	3.	8.189	8.052	P.137
639DA	16	8.	8.2P9	8.078	P.131
74JAA	18	12.	8.938	7.998	P.102
74JCA	19	2.	7.856	7.347	P.508
52GA1	20	1.	6.189	6.918	-P.829
71ZAA	21	1.	6.477	7.168	-P.693
71Z9A	22	6.	6.477	5.958	P.519
71ZCA	23	15.	4.382	5.118	-P.736
73EGA	24	7.	8.448	8.856	-P.4P8
71[]PA	25	19.	11.338	10.713	P.625
73MAA	26	20.	9.887	8.958	P.128
73MCA	27	12.	8.121	8.227	-P.P85
73NAA	28	7.	9.985	8.866	P.498
73QAA	29	10.	8.292	8.126	P.166
73SCA	30	7.	9.114	8.825	P.289
73X9A	31	1.	7.383	6.984	P.328
73XFA	33	1.	7.138	6.857	P.278
73XKA	34	4.	8.833	8.PP4	P.829
7593A	35	5.	5.333	5.522	-P.19C
74BFA	37	3.	8.783	7.999	-P.396
74B1A	38	4.	8.805	8.448	P.157
79A1A	39	4.	9.787	9.582	P.285
74FAA	42	43.	5.352	5.544	-P.192
74FMA	43	5.	7.339	7.897	-P.388
74FUA	44	14.	8.592	8.914	P.779
858MA	47	8.	5.455	5.484	-P.029
74FCA	48	11.	7.681	8.254	-P.553
74FKA	50	5.	0.273	5.897	-P.424
74FUA	51	53.	9.219	9.275	-P.P56
74KCA	53	4.	8.878	7.383	P.793
74CAA	54	4.	7.819	7.852	P.557
74CCA	56	3.	7.478	6.748	P.731
74FA1	57	5.	7.812	7.462	P.350
74E9A	58	4.	7.919	7.817	P.P92
73PMA	59	4.	7.998	7.825	-P.535
73PPA	60	37.	7.389	7.436	-P.P56
73P03	61	17.	7.998	8.871	P.219
73P4A	63	6.	7.148	7.324	-P.176
71NAA	64	3.	8.548	8.211	P.329
71QUA	65	3.	8.548	8.211	P.329
83AAA	66	8.	5.399	8.888	-P.281
83AGA	69	2.	8.133	8.459	-P.325
839FA	70	7.	5.3P3	5.354	-P.05P
71ABE	71	9.	5.P89	5.219	-P.150
71A0A	72	5.	8.509	8.314	P.195
73DBA	73	2.	8.977	7.298	-P.332
71ACC	74	27.	4.359	4.185	P.185
73CBG	75	27.	4.263	4.121	P.142
73CEN	76	6.	8.544	8.436	P.108

OBSV.	OBS. Y	FITTED Y	ORDERED BY RESIDUALS ORDERED RESID.	SEQ
1P	7.681	6.714	P.967	1
34	P.833	8.PP4	P.829	2
79	6.24P	5.442	P.798	3
116	6.477	5.682	P.795	4
121	7.434	6.688	P.746	5
11	7.313	6.578	P.743	6
56	7.479	6.74P	P.731	7
53	8.P86	7.3P3	P.783	8
28	9.565	8.866	P.698	9
25	11.338	1P.713	P.629	10
106	9.517	8.923	P.594	11
125	8.251	7.688	P.564	12
54	7.819	7.262	P.557	13
95	8.398	7.855	P.536	14
85	8.PP7	7.474	P.533	15
22	6.477	5.958	P.519	16
19	7.856	7.347	P.508	17
114	8.155	7.648	P.507	18
93	8.436	5.9P8	P.496	19
118	8.436	5.948	P.496	2P
197	7.981	7.493	P.488	21
3	8.157	7.734	P.423	22
77	8.639	8.266	P.373	23
112	5.951	5.59P	P.365	24
57	7.812	7.462	P.35P	25
1PP	8.745	8.403	P.343	26
84	8.54P	8.211	P.329	27
65	8.548	8.211	P.329	28
31	7.383	6.984	P.328	29
38	9.114	8.825	P.289	3P
39	9.787	9.5P2	P.285	31
33	7.138	6.857	P.278	32
61	7.998	6.871	P.219	33
12	8.178	7.975	P.2P1	34
72	8.5P9	8.314	P.195	35
74	4.389	4.185	P.185	36
29	8.292	8.126	P.166	37
3P	P.685	8.448	P.157	38
5	6.153	6.997	P.146	39
75	4.263	4.121	P.142	4P
15	8.189	8.052	P.137	41
18	8.P38	7.9P6	P.132	42
1P	8.2P9	8.P78	P.131	43
26	9.P87	P.958	P.128	44
84	7.654	7.545	P.11C	45
76	8.544	8.436	P.1P8	46
1P9	8.4P4	8.3P2	P.1P1	47
11P	8.178	8.P99	P.079	48
44	8.592	8.514	P.079	49
91	8.741	8.666	P.075	5P
92	8.741	8.6P6	P.075	51
89	8.274	8.2PP	P.P74	52
13	7.388	7.32P	P.P48	53
1P8	5.529	5.4P4	P.P45	54
1P2	8.178	8.154	P.P1P	55
5P	7.819	7.817	P.PP2	56
47	5.455	5.4P4	-P.P29	57
6	5.252	5.289	-P.P37	58
83	8.178	8.218	-P.P4P	59
7P	5.383	5.394	-P.P5P	6P

73CPK	77	7.	8,639	8,266	0,373	60	7,388	7,438	-0,050	81
73DAM	78	5.	5,495	6,113	-0,620	51	9,210	9,276	-0,066	82
73E9A	79	0.	6,249	5,442	0,799	27	8,121	8,207	-0,085	83
73E8P	80	4.	5,799	5,962	-0,261	101	6,991	7,099	-0,109	84
71CA0	81	5.	5,624	5,775	-0,151	71	5,059	5,219	-0,159	85
73EG0	82	9.	4,485	4,833	-0,348	81	5,624	5,775	-0,151	86
73HC0	83	11.	8,178	8,218	-0,040	110	6,547	6,705	-0,158	87
73L40	84	3.	7,054	7,545	0,110	63	7,148	7,324	-0,176	88
77EC0	85	2.	8,007	7,474	0,533	35	9,533	9,522	-0,189	89
77DC4	87	3.	7,072	8,283	-0,211	42	5,352	5,544	-0,192	70
764EA	89	9.	8,274	8,298	0,074	87	7,872	8,083	-0,211	71
73X40	90	2.	6,782	7,179	-0,396	123	7,498	7,719	-0,220	72
838A4	91	3.	6,741	6,666	0,075	103	9,266	9,519	-0,233	73
83CA4	92	3.	6,741	6,666	0,075	99	6,781	7,019	-0,238	74
85P4A	93	3.	6,436	5,940	0,496	111	5,081	5,328	-0,246	75
81B8A	94	2.	6,426	6,834	-0,409	7	5,501	5,760	-0,259	76
81A40	95	2.	8,399	7,855	0,536	80	5,788	5,982	-0,201	77
81AC0	97	1.	8,339	7,824	-0,686	66	6,399	6,688	-0,281	78
72ACP	99	2.	6,781	7,019	-0,238	68	6,133	6,459	-0,325	79
71CA0	100	4.	6,745	6,483	0,343	105	7,491	7,758	-0,329	80
72FAA	101	3.	6,991	7,099	-0,109	122	8,337	8,666	-0,329	81
72ECA	102	0.	6,178	6,194	0,016	73	6,927	7,258	-0,332	82
72BP0	103	17.	9,288	9,519	-0,233	82	8,485	8,833	-0,348	83
71JAA	104	1.	5,587	6,318	-0,731	128	6,312	6,674	-0,363	84
71L40	105	0.	7,491	7,738	-0,329	43	7,338	7,697	-0,358	85
72DMP	106	8.	9,517	8,923	0,594	37	6,793	7,999	-0,396	86
72AC0	107	1.	7,981	7,493	0,488	98	6,782	7,178	-0,396	87
71718	108	0.	5,529	5,484	0,045	115	6,477	6,884	-0,407	88
71310	109	5.	6,424	6,392	0,191	94	6,428	6,834	-0,428	89
72MP8	110	6.	9,178	8,899	0,279	24	8,448	8,856	-0,408	90
72MB8	111	6.	5,991	5,328	-0,246	58	5,273	5,697	-0,424	91
71JCE	112	5.	5,961	5,596	0,365	117	4,382	4,842	-0,460	92
72AE0	113	9.	8,145	8,953	-0,808	4	6,628	7,143	-0,515	93
72CC0	114	2.	8,155	7,648	0,507	59	7,090	7,625	-0,535	94
71Z43	115	1.	6,477	6,884	-0,407	2	6,345	7,085	-0,538	95
71Z80	116	7.	6,477	5,682	0,795	127	5,694	6,263	-0,570	96
71Z00	117	15.	4,382	4,842	-0,460	128	4,787	5,300	-0,588	97
85P4A	118	3.	6,436	5,940	0,496	78	5,485	6,113	-0,628	98
83AP8	119	3.	6,547	6,705	-0,158	48	7,691	8,254	-0,653	99
83AA8	120	1.	6,378	7,498	-1,020	21	6,477	7,160	-0,683	100
83121	121	3.	7,434	6,666	0,768	97	6,339	7,024	-0,686	101
83A8A	122	2.	6,337	6,666	-0,329	104	5,587	6,318	-0,731	102
55AL0	123	0.	7,098	7,715	-0,225	93	4,382	5,118	-0,736	103
55AY8	124	12.	7,499	8,388	-0,879	9	6,988	7,679	-0,772	104
8,AA8	125	2.	6,251	7,686	0,564	113	6,149	6,953	-0,806	105
81AE0	126	2.	6,312	6,674	-0,363	28	6,109	6,918	-0,809	106
82AA8	127	8.	9,094	8,283	-0,579	124	7,498	8,388	-0,870	107
84211	128	11.	4,787	5,387	-0,588	120	6,378	7,498	-1,020	108


O&M MODEL RUN9
DEP VAR IS LSRA
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .998 .999
POSITIVE
0
NEGATIVE
RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .998 .999
CUMULATIVE FREQUENCY, NORMAL GRID


OSM MODEL RUN9
DEP VAR :: LSRA
RESIDUAL VS. FITTED Y
4.121
7.417
10.713
POSITIVE
0
NEGATIVE
RESIDUALS
4.121
7.417
10.713
FITTED Y

CP VALUES FOR THE SELECTION OF VARIABLES

O&M MODEL RUNS DEP VAR 15 LSRA SEARCH NUMBER 1

SELECTION OF VARIABLES FOR BASIC EQUATION

CP =144.5, VARIABLE ADDED 13 LUP

CP =118.7, VARIABLE ADDED 9 DMT

CP = 81.6, VARIABLE ADDED 10 DCC

CP = 64.2, VARIABLE ADDED 1 FIGBEN

CP = 54.2, VARIABLE ADDED 7 DUP

CP = 48.7, VARIABLE ADDED 8 DVO

CP = 41.5, VARIABLE ADDED 12 DPS

CP = 31.8, VARIABLE ADDED 11 DEM

CP = 28.8, VARIABLE ADDED 2 FIGCOM

CP = 21.7, VARIABLE ADDED 6 DI

CP = 17.8, VARIABLE ADDED 14 LCC

CP = 16.7, VARIABLE ADDED 5 CARNAV

CP = 15.1, VARIABLE ADDED 3 BOMNAV

CP = 15.8, VARIABLE ADDED 4 BOMBEN

NUMBER OF OBSERVATIONS 183
NUMBER OF VARIABLES IN FULL EQUATION 14
NUMBER OF VARIABLES IN BASIC EQUATION 12
REMAINDER OF VARIABLES TO BE SEARCHED 2

EQUATION	P	CP	VARIABLES IN EQUATION
	15	15,0	FULL EQUATION
	13	15,1	BASIC SET OF VARIABLES 1 FIGSEN, 2 FIGCOM, 5 CARNAV, 6 DI, 7 DUP, 8 DVO, 9 DWT, 10 DCC, 11 DEN, 12 DPB
			13 LUP, 14 LCC
			RMS = 0,23585
1	14	15,1	BASIC SET PLUS 3 BOMNAV
			RMS = 0,23269
2	15	15,0	BASIC SET PLUS 3 BOMNAV, 4 BOMBEN
			RMS = 0,23081
3	14	16,0	BASIC SET PLUS 4 BOMBEN
			RMS = 0,23483

SWEEP NUMBER 3, DELTA Z(K,K) = 1,0-17

ESTIMATE OF VARIANCE

NO SMALLER RMS VALUE FOUND IN SUBSET EQUATIONS

RMS OF FULL EQUATION SELECTED BY USER TO CALCULATE CP VALUES

SEQ	EQUATION	P	ORDERED CP
1	2	15	15,0
2	1	14	15,1
3	3	14	16,0

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN#8 DEP VAR 1: LTRAIN MIN Y = -7.8630 02 MAX Y = 1.3870 00 RANGE Y = 8.4490 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPOS" MODEL
LTRAIN = B(0) + B(1)*FIGCOM + B(2)BOMSEN + B(3)CARNAV + B(4)CARCOM
+ B(5)UP + B(6)WT + B(7)DI + B(8)UF + B(9)MVO + B(10)MCC
+ B(11)MCO + B(12)MEM + B(13)MPS + B(14)MSS + B(15)DVO
+ B(16)DCC + B(17)DCO + B(18)DEM + B(19)DPS
+ B(20)DSS + B(21)LUP + B(22)LVO + B(23)LCC
+ B(24)LPO

LTRAIN = LN(TRAIN)
TRAIN = TRAINING COST PER OPERATING HOUR

IND.VAR(I)	NAME	COEF.B(I)	S.E. COEF.	T-VALUE	R(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL.INF.X(I)
0		-7.602230 00							
1	FIGCOM	7.132430-01	3.130-01	2.3	0.2145	0.0	1.0000 00	1.0000 00	0.08
2	BOMSEN	-9.493150-01	3.850-01	2.5	0.2865	0.0	1.0000 00	1.0000 00	0.11
3	CARNAV	-1.185660 00	2.220-01	5.3	0.3266	0.0	1.0000 00	1.0000 00	0.13
4	CARCOM	-6.324790-01	2.000-01	2.3	0.3515	0.0	1.0000 00	1.0000 00	0.07
5	UP	-5.169360-06	1.430-06	3.6	0.6408	1.5300 02	5.6630 05	5.6630 05	0.35
6	WT	9.879810-03	4.190-03	2.4	0.7584	1.0000 00	1.7370 02	1.7270 02	0.20
7	DI	-1.412930-02	2.380-03	5.9	0.4659	0.0	1.0000 02	1.0000 02	0.17
8	UF	-3.786680-01	1.390-01	2.3	0.4954	3.0000-01	3.1000 00	2.8000 00	0.12
9	MVO	-4.823110-02	1.530-04	3.2	0.9166	-1.3150 03	6.8550 03	8.1700 03	0.47
10	MCC	4.628470-04	1.190-04	3.9	0.8549	-1.1820 03	7.1680 03	8.2900 03	0.45
11	MCO	3.184760-01	1.440-01	2.1	0.8695	-1.2450 00	5.4240 00	6.6690 00	0.25
12	MEM	-2.173220-02	5.490-03	4.0	0.7311	-8.5700 00	9.1430 01	1.0000 02	0.26
13	MPS	-6.897790-03	3.750-03	1.8	0.1112	-5.2000 00	9.4800 01	1.0000 02	0.08
14	MSS	-1.475570-02	3.380-03	4.4	0.6934	-7.9400 01	2.0600 01	1.0000 02	0.17
15	DVO	7.643570-08	3.560-08	2.0	0.7875	1.7640 03	2.4800 07	2.4800 07	0.21
16	DCC	-1.163610-07	2.650-08	4.1	0.3368	8.1000 01	2.8170 07	2.8170 07	0.38
17	DCO	-1.592320-01	4.630-02	3.2	0.6342	1.1240-05	1.8520 01	1.8520 01	0.33
18	DEM	-4.249230-04	1.660-04	2.6	0.3894	1.6560 01	3.2410 03	3.2240 03	0.16
19	DPS	-6.783820-04	1.890-04	3.6	0.3344	4.0960 01	2.9480 03	2.9060 03	0.23
20	DSS	-2.883510-04	1.280-04	1.6	0.3785	1.7640 01	2.9380 03	2.9200 03	0.07
21	LUP	8.226570-01	9.110-02	8.8	0.8859	5.8340 00	1.3250 01	8.2170 00	0.61
22	LVO	1.113480 00	2.790-01	4.0	0.9089	3.4810 00	9.0120 00	5.6110 00	0.74
23	LCC	-7.614680-01	2.830-01	3.6	0.9521	2.1970 00	8.0240 00	6.8270 00	0.62
24	LPO	2.579360-01	7.260-02	3.6	0.0162	1.0990 00	8.0060 00	6.9060 00	0.21

NO. OF OBSERVATIONS	118
NO. OF IND. VARIABLES	24
RESIDUAL DEGREES OF FREEDOM	93
F-VALUE	22.5
RESIDUAL ROOT MEAN SQUARE	0.71102694
RESIDUAL MEAN SQUARE	0.50555931
RESIDUAL SUM OF SQUARES	47.01781680
TOTAL SUM OF SQUARES	319.00748763
MULT. CORREL. COEF. SQUARED	.8530

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

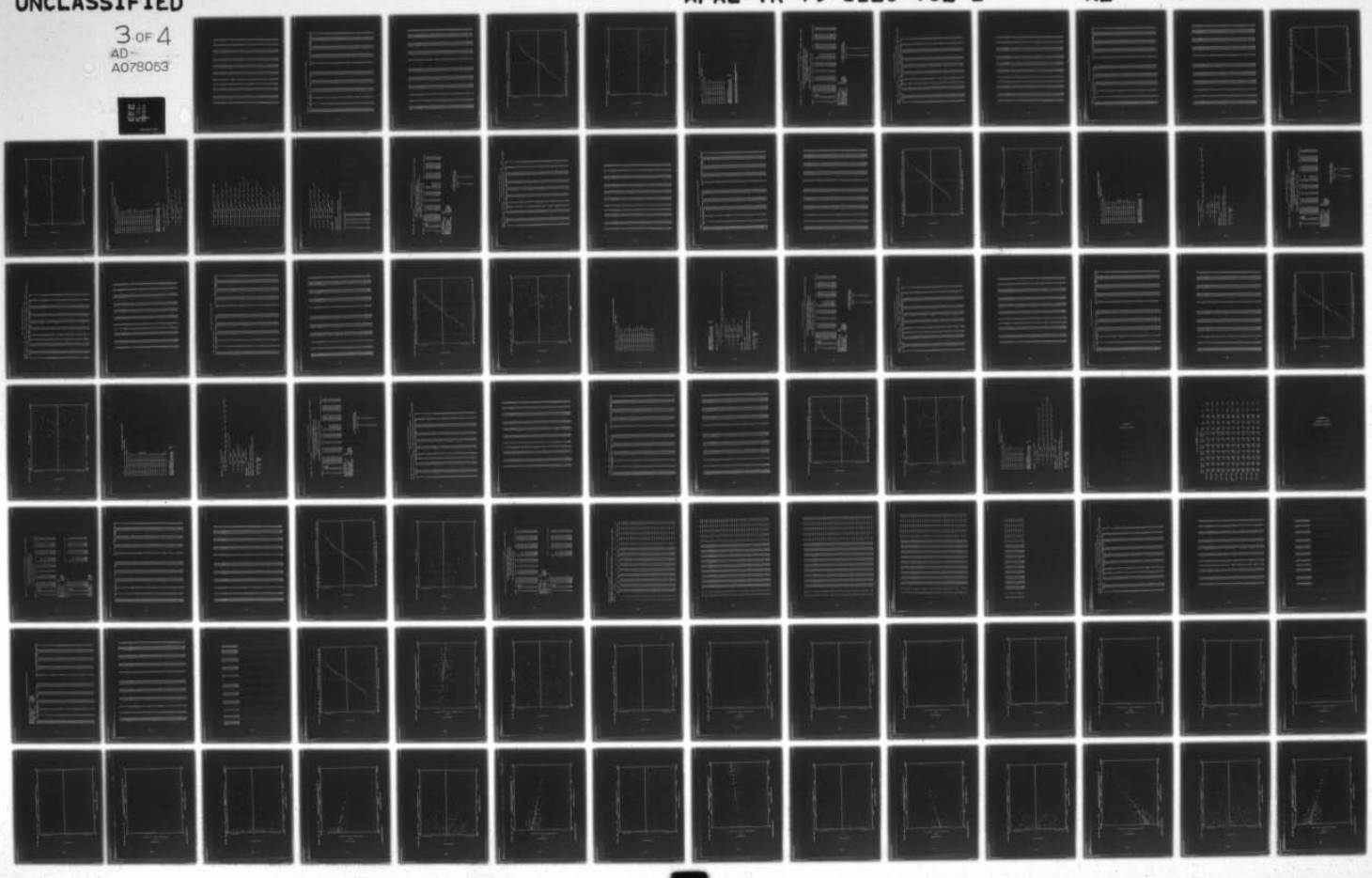
GAM MODEL RUN10 DEP VAR 1: LTRAIN RESIDUAL ROOT MEAN SQUARE OF FITTED EQUATION: 0.71

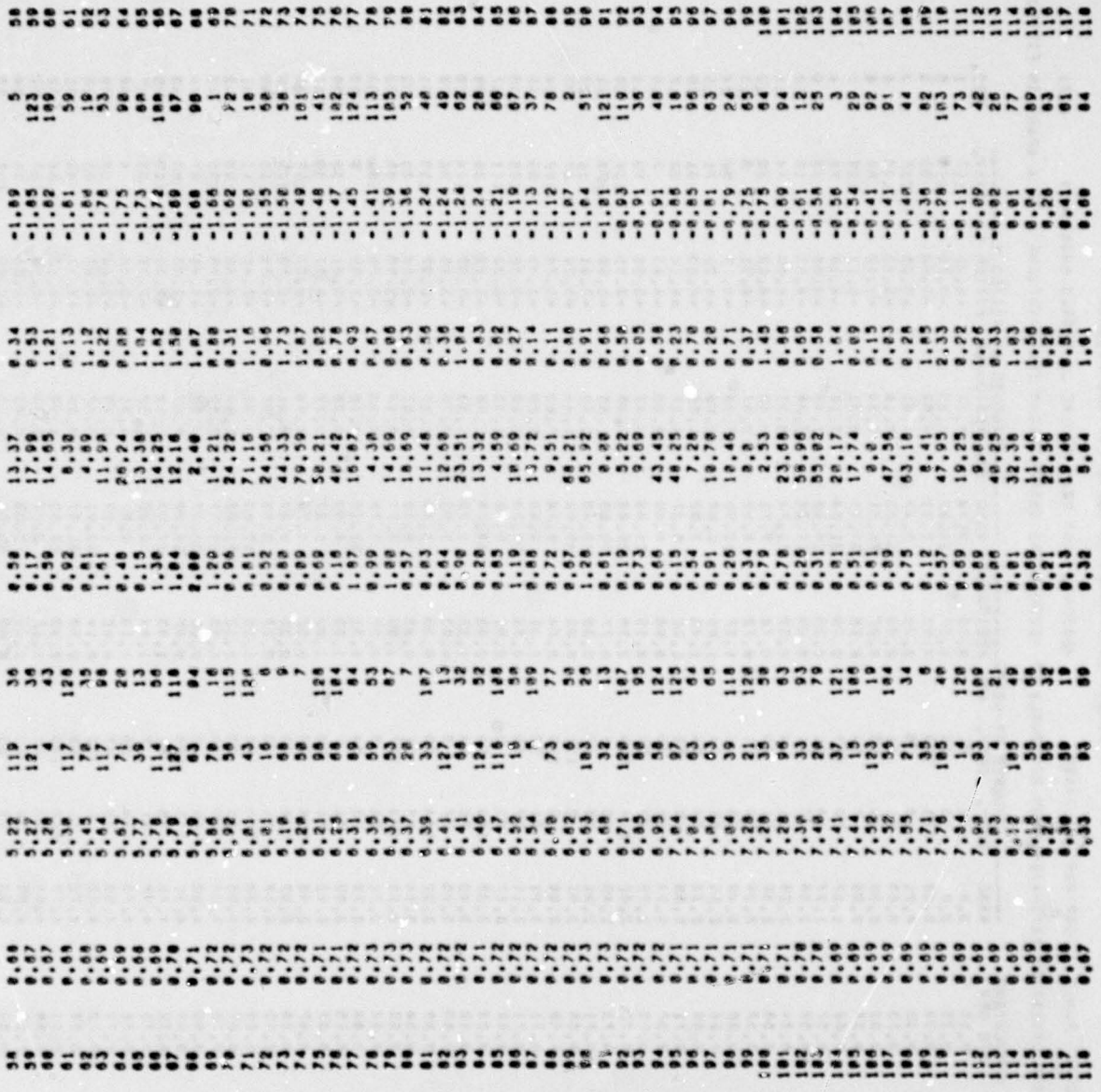
STANDARD DEVIATION ESTIMATED FROM RESIDUALS OF NEIGHBORING OBSERVATIONS (OBSERVATIONS 1 TO 4 APART IN FITTED Y ORDER).

NO.	CUMULATIVE STD DEV	ORDERED BY XSSD	OBSV.	OBSV.	DEL	RESIDUALS	XSSD	DEL	ORDERED BY FITTED Y RESIDUALS	FITTED Y	OBSV.	SEQ.
1	0.15	0.0	92	92		0.15	0.04		0.37	-6.48	117	1
2	0.20	0.0	65	64		0.37	21.08		1.29	-5.79	116	2
3	0.30	0.00	121	119		0.66	0.21		0.48	-5.68	98	3
4	0.39	0.21	10	35		0.48	0.47		1.41	-5.25	128	4
5	0.73	0.68	71	81		2.89	31.39		0.19	-5.23	108	5
6	0.82	0.86	13	15		0.07	38.91		0.30	-5.12	88	6
7	0.57	0.86	7	70		0.26	35.50		0.31	-5.11	122	7
8	0.60	1.27	30	107		0.70	21.04		0.20	-4.88	78	8
9	0.57	1.27	14	21		0.35	14.29		1.40	-4.85	75	9
10	0.56	1.80	7	11		0.45	11.20		0.26	-4.32	16	10
11	0.54	2.06	31	4		0.32	11.74		0.31	-4.68	74	11
12	0.56	2.37	71	20		0.76	7.71		0.12	-4.66	35	12
13	0.57	2.36	79	11		0.72	0.82		0.67	-4.51	6	13
14	0.60	2.48	95	1		1.07	12.80		0.90	-4.49	58	14
15	0.64	2.53	65	84		1.98	0.60		0.78	-4.22	71	15
16	0.69	2.53	84	94		1.45	3.98		1.99	-4.13	81	16
17	0.71	2.60	48	63		1.06	0.37		0.57	-4.12	28	17
18	0.67	2.74	92	49		0.86	0.86		0.26	-4.03	7	18
19	0.65	2.78	49	86		0.16	11.88		0.47	-3.86	76	19
20	0.73	2.92	114	118		2.26	25.02		0.46	-3.85	118	20
21	0.73	2.98	85	4		0.77	28.95		1.69	-3.82	76	21
22	0.71	2.91	86	37		0.35	16.49		1.83	-3.81	11	22
23	0.68	2.91	2	121		0.83	45.24		1.44	-3.79	4	23
24	0.68	2.98	2	110		0.64	8.74		0.83	-3.78	112	24
25	0.71	3.01	81	78		1.31	0.88		1.09	-3.46	99	25
26	0.71	3.11	50	68		0.74	22.74		2.16	-3.38	126	26
27	0.68	3.17	93	8		0.81	8.78		1.53	-3.23	111	27
28	0.66	3.35	122	93		0.83	36.78		1.88	-3.13	38	28
29	0.66	3.45	78	74		1.38	9.78		1.38	-2.87	114	29
30	0.66	3.45	37	2		0.93	9.82		0.96	-2.85	56	30
31	0.65	3.92	104	30		0.38	0.84		1.88	-2.97	115	31
32	0.64	3.94	99	31		0.45	0.10		0.69	-2.96	55	32
33	0.66	3.93	108	127		1.09	0.26		0.16	-2.85	66	33
34	0.64	3.70	53	5		0.97	9.78		0.95	-2.76	104	34
35	0.64	3.79	83	84		0.31	10.16		0.18	-2.66	9	35
36	0.65	3.88	71	7		1.09	0.94		0.76	-2.61	32	36
37	0.67	3.92	01	28		1.62	1.27		0.79	-2.57	39	37
38	0.67	3.99	120	78		0.57	5.79		1.84	-2.53	127	38
39	0.65	3.97	120	33		0.22	0.87		0.41	-2.52	118	39
40	0.65	4.18	31	43		0.27	0.86		0.87	-2.52	13	40
41	0.66	4.28	114	55		1.26	15.89		0.32	-2.49	15	41
42	0.67	4.26	36	83		1.12	31.98		0.83	-2.48	69	42
43	0.73	4.28	115	104		1.85	28.58		0.58	-2.46	106	43
44	0.69	4.28	63	2		0.32	23.37		0.22	-2.46	97	44
45	0.69	4.36	113	105		0.67	14.88		0.87	-2.43	85	45
46	0.72	4.48	35	81		1.93	17.28		0.52	-2.38	125	46
47	0.73	4.58	81	7		1.84	2.26		0.32	-2.36	31	47
48	0.71	4.53	68	39		0.14	0.87		0.71	-2.34	4	48
49	0.71	4.59	66	67		0.62	1.27		0.35	-2.28	14	49
50	0.70	4.62	2	36		0.14	12.91		0.49	-2.27	21	50
51	0.69	4.72	11	99		0.36	21.97		0.28	-2.17	43	51
52	0.69	4.75	117	108		0.49	13.92		1.18	-2.17	34	52
53	0.68	4.84	35	71		0.17	3.97		0.22	-2.14	128	53
54	0.69	4.89	19	53		1.12	0.39		0.93	-2.06	33	54
55	0.68	4.95	56	55		0.85	29.58		0.10	-2.06	107	55
56	0.69	4.98	11	126		1.45	14.84		0.32	-2.02	57	56
57	0.68	5.16	88	1		0.34	3.17		0.81	-1.93	93	57

AD-A078 053 WESTINGHOUSE ELECTRIC CORP HUNT VALLEY MD F/G 14/1
PREDICTIVE OPERATIONS AND MAINTENANCE COST MODEL. VOLUME II.(U)
AUG 79 E E FELTUS F33615-77-C-1105
UNCLASSIFIED AFAL-TR-79-1120-VOL-2 NL

3 OF 4
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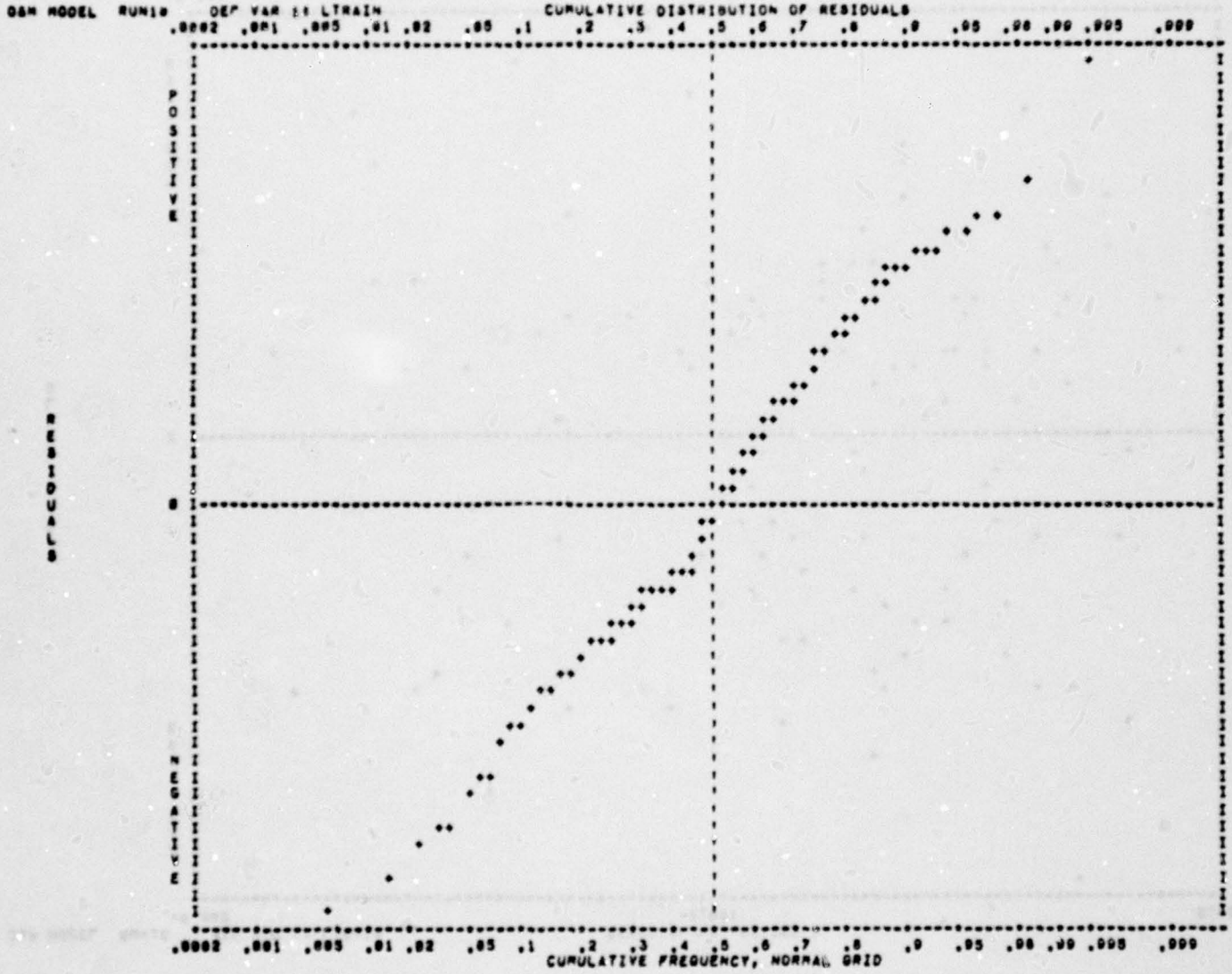


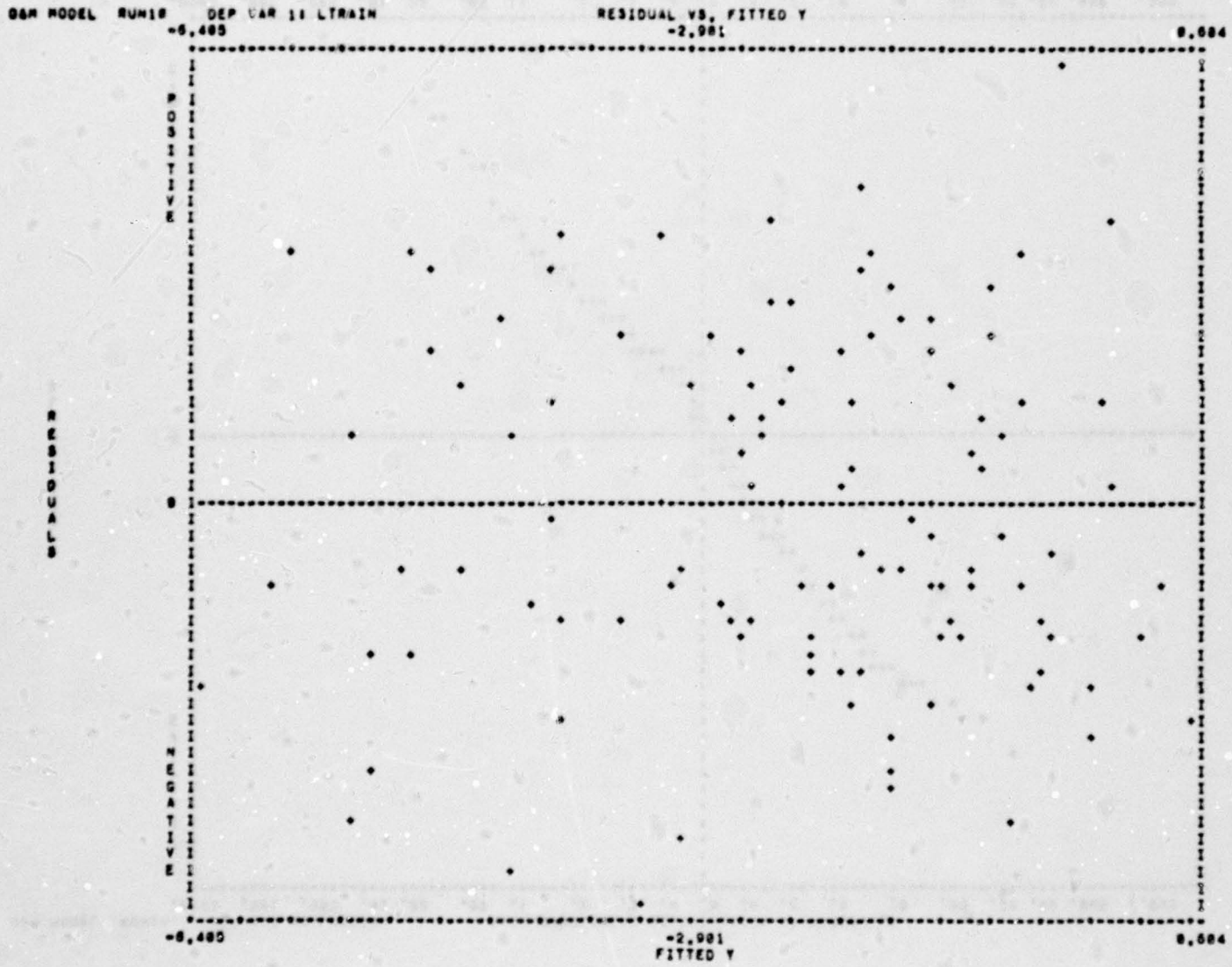
LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN10 DEP VAR IS LTRAIN

IDENT,	OBSV,	ORDERED BY COMPUTER INPUT: WSS DISTANCE	OBS. Y	FITTED Y	RESIDUAL	ORDERED BY RESIDUALS: OBSV,	OBS. Y	FITTED Y	ORDERED RESID,	SEQ
7182P	1	2,	-1.837	-1.663	-P.174	103	1.387	-P.981	1.667	1
71L8P	2	4,	-1.588	-1.288	-P.432	188	-P.511	-1.715	1.204	2
71M6P	3	15,	P.482	-P.556	P.958	89	1.126	P.837	1.888	3
71PK8	4	2,	-1.268	-2.342	1.982	4	-1.268	-2.342	1.982	4
71P9P	5	4,	-2.166	-1.893	-P.273	47	-2.753	-3.794	1.041	5
71718	6	37,	-4.987	-4.513	P.426	114	-2.834	-3.867	1.033	6
724G8	7	16,	-4.383	-4.828	-P.336	3	P.482	-P.556	P.958	7
71FAP	8	18,	-2.992	-2.662	-P.338	98	-4.728	-5.676	P.956	8
71F88	18	13,	-P.659	-1.597	P.938	16	-3.879	-4.823	P.944	9
71C4P	11	18,	-4.688	-3.813	-P.787	18	-P.659	-1.597	P.938	18
71D4P	12	12,	-P.928	-P.614	-P.386	95	-P.788	-1.679	P.891	11
51EA8	13	3,	-2.347	-2.528	P.173	76	-2.959	-3.825	P.866	12
52AA8	14	5,	-1.999	-2.288	P.371	74	-3.821	-4.684	P.863	13
52A88	15	9,	-2.385	-2.491	P.186	181	-P.648	-1.487	P.846	14
63b08	16	22,	-3.879	-4.823	P.944	63	P.814	-P.813	P.828	15
74JA8	18	44,	-P.589	-P.857	P.348	34	-1.392	-2.169	P.777	16
74JC8	19	8,	-2.537	-1.795	-P.741	31	-1.595	-2.358	P.763	17
52GA1	28	5,	-3.883	-4.119	P.236	28	-P.528	-1.248	P.721	18
71ZA8	21	5,	-2.243	-2.267	P.P24	71	-3.587	-4.221	P.714	19
73EC8	24	13,	-P.165	-P.791	P.626	113	-P.785	-1.414	P.789	28
73EP8	25	38,	-P.198	-P.579	P.382	126	-2.716	-3.383	P.667	21
73HA8	26	27,	P.367	-P.816	P.384	72	-P.994	-1.624	P.629	22
73HA8	28	11,	-P.528	-1.248	P.721	24	-P.165	-P.791	P.626	23
73G88	29	7,	-1.225	-P.542	-P.683	184	-2.134	-2.756	P.622	24
73K8P	31	7,	-1.595	-2.358	P.763	48	-P.638	-1.243	P.685	25
73CE8	32	4,	-3.P47	-2.613	-P.434	189	-1.217	-1.828	P.693	26
73AF8	33	3,	-2.693	-2.951	-P.542	118	-1.941	-2.521	P.588	27
73KKP	34	13,	-1.392	-2.169	P.777	35	-4.129	-4.677	P.548	28
7593P	35	19,	-4.129	-4.677	P.548	43	-1.679	-2.175	P.496	29
74B09	36	5,	-1.284	-P.914	-P.289	68	-2.385	-2.858	P.466	38
749F8	37	3,	-1.592	-1.129	-P.463	51	-P.584	-1.237	P.452	31
74818	38	23,	-3.P92	-3.125	P.833	69	-2.858	-2.479	P.429	32
76A18	39	4,	-2.258	-2.571	P.321	6	-4.887	-4.513	P.426	33
766A8	48	8,	-P.638	-1.243	P.685	118	-3.445	-3.847	P.482	34
74FFP	41	49,	-2.588	-1.488	-1.P21	28	P.367	-P.P16	P.384	35
74FA8	42	29,	-P.972	-P.892	-P.888	53	-1.394	-1.777	P.383	36
74FH8	43	7,	-1.679	-2.175	P.496	25	-P.198	-P.579	P.382	37
74FU8	44	42,	-P.769	-P.482	-P.488	14	-1.999	-2.288	P.371	38
658H8	47	6,	-2.753	-3.794	1.P41	18	-P.589	-P.857	P.348	39
749C8	49	7,	-1.148	-P.912	-P.237	39	-2.258	-2.579	P.321	48
74FJP	49	4,	-1.198	-1.242	P.P43	85	-2.112	-2.425	P.314	41
74FK8	58	25,	-4.738	-4.483	-P.244	64	-P.458	-P.745	P.287	42
74F08	51	59,	-P.584	-1.837	P.452	128	-4.985	-5.249	P.264	43
74KAP	52	8,	-1.388	-1.359	-P.P21	125	-2.134	-2.377	P.242	44
74KC8	53	6,	-1.394	-1.777	P.383	28	-3.883	-4.119	P.236	45
74C68	55	5,	-3.185	-2.968	-P.224	119	-P.728	-P.935	P.286	46
74CCP	58	5,	-3.318	-3.948	-P.278	13	-2.347	-2.528	P.173	47
74FA1	57	18,	-2.624	-2.816	-P.698	98	-1.588	-1.746	P.167	48
74E88	58	6,	-2.385	-1.583	-P.882	88	-1.567	-1.733	P.165	49
73PHP	59	4,	-2.423	-1.813	-P.618	96	-P.724	-P.847	P.123	58
73P88	68	38,	-1.776	-1.554	-P.222	15	-2.385	-2.491	P.186	51
73P08	61	21,	P.141	P.489	-P.258	97	-2.385	-2.459	P.P94	52
73PF8	62	28,	-1.558	-1.241	-P.317	123	-1.781	-1.851	P.P78	53
73PH8	63	4,	P.P14	-P.813	P.828	77	P.969	P.P14	P.P55	54
71NAP	64	5,	-P.458	-P.745	P.287	49	-1.198	-1.242	P.843	55
71GU8	65	5,	-P.825	-P.745	-P.P88	185	-1.357	-1.393	P.P36	56
63AAP	66	2,	-1.325	-1.213	-P.112	38	-3.P92	-3.125	P.P33	57
65AA8	67	5,	-1.925	-1.193	-P.732	21	-P.243	-P.267	P.P24	58

634GA	68	4.	-2.385	-2.458	0.466	92	-1.388	-1.359	-0.021	59
639CA	69	12.	-2.958	-2.479	0.429	79	-3.932	-3.861	-0.071	60
638FA	70	24.	-5.135	-4.878	-0.257	65	-0.825	-0.745	-0.088	61
71ABE	71	11.	-3.587	-4.221	0.714	66	-1.325	-1.213	-0.112	62
71ADA	72	8.	-0.994	-1.624	0.629	1	-1.837	-1.663	-0.174	63
73DBA	73	29.	-0.772	-0.111	-0.660	82	-0.541	-0.356	-0.186	64
71ACC	74	36.	-3.821	-4.684	0.863	124	-1.672	-1.452	-0.220	65
73CBQ	75	54.	-5.381	-4.865	-0.517	38	-1.776	-1.554	-0.222	66
73CEN	76	31.	-2.959	-3.825	0.866	55	-3.185	-2.960	-0.224	67
73CFA	77	42.	0.969	0.814	0.855	48	-1.146	-0.912	-0.237	68
73DAM	78	16.	-1.446	-1.123	-0.325	58	-4.730	-4.485	-0.244	69
73EBA	79	16.	-3.932	-3.861	-0.071	78	-5.135	-4.878	-0.257	70
73EBF	80	7.	-1.587	-1.733	0.165	61	0.141	0.429	-0.288	71
71CAB	81	8.	-5.585	-4.125	-1.358	56	-3.318	-3.048	-0.270	72
73EGB	82	14.	-0.541	-0.356	-0.186	5	-2.166	-1.893	-0.273	73
73HCB	83	12.	-0.289	0.283	-0.472	93	-2.212	-1.926	-0.286	74
73LAB	84	8.	-0.178	0.604	-0.781	36	-1.294	-0.914	-0.289	75
77ECB	85	5.	-2.112	-2.425	0.314	116	-0.983	-5.703	-0.298	76
77DCA	87	5.	-2.388	-1.686	-0.814	12	-0.928	-0.614	-0.386	77
77DBP	88	44.	-6.874	-5.119	-0.955	62	-1.558	-1.241	-0.317	78
78AEA	89	14.	1.126	0.837	1.888	128	-2.458	-2.140	-0.318	79
73KAB	90	13.	-1.568	-1.746	0.167	78	-1.448	-1.123	-0.325	80
639AA	91	6.	-0.852	-0.413	-0.439	9	-2.992	-2.582	-0.338	81
83CAA	92	8.	-1.897	-2.413	0.594	7	-4.363	-4.028	-0.336	82
659AA	93	5.	-2.212	-1.928	-0.285	112	-4.179	-3.781	-0.398	83
61BBA	94	5.	-1.853	-0.685	-1.168	106	-2.883	-2.461	-0.422	84
61AAB	95	5.	-0.788	-1.679	0.891	99	-3.824	-3.399	-0.425	85
61ABP	96	5.	-0.724	-0.847	0.123	2	-1.500	-1.068	-0.432	86
614CB	97	18.	-2.385	-2.459	0.894	32	-3.847	-2.913	-0.434	87
72AAB	98	42.	-4.728	-5.578	0.956	91	-0.852	-0.413	-0.439	88
724CA	99	23.	-3.824	-3.399	-0.425	121	-1.465	-1.008	-0.457	89
71CAA	100	9.	-0.511	-1.715	1.204	37	-1.592	-1.129	-0.463	90
72EAA	101	31.	-0.648	-1.487	0.846	127	-2.993	-2.529	-0.464	91
72ECA	102	26.	-2.466	-1.472	-0.998	44	-0.869	-0.422	-0.466	92
72BPO	103	27.	1.387	-0.281	1.667	83	-0.209	0.263	-0.472	93
71JAP	104	5.	-2.134	-2.756	0.622	107	-2.569	-2.059	-0.510	94
71LAB	105	9.	-1.357	-1.393	0.036	75	-5.381	-4.865	-0.517	95
72CNB	106	18.	-2.883	-2.481	-0.402	33	-2.683	-2.981	-0.542	96
72ACP	107	4.	-2.569	-2.059	-0.510	122	-5.678	-5.189	-0.589	97
71716	108	11.	-6.373	-5.229	-1.144	92	-1.887	-0.413	-0.594	98
71310	109	9.	-1.217	-1.820	0.603	57	-2.624	-2.016	-0.608	99
72RFA	110	11.	-3.445	-3.847	0.402	59	-2.423	-1.813	-0.610	100
72R6B	111	18.	-4.730	-3.233	-1.497	87	-2.388	-1.886	-0.614	101
71JCE	112	31.	-4.179	-3.781	-0.398	117	-7.243	-6.485	-0.658	102
724E0	113	21.	-0.795	-1.414	0.739	73	-0.772	-0.111	-0.660	103
72CC0	114	5.	-2.934	-3.867	1.933	29	-1.225	-0.542	-0.683	104
71ZAB	115	7.	-4.193	-2.965	-1.228	67	-1.925	-1.193	-0.732	105
71ZBP	116	15.	-6.083	-5.793	-0.290	19	-2.537	-1.795	-0.741	106
71ZDB	117	27.	-7.083	-6.425	-0.658	84	-2.179	-0.604	-0.781	107
659AA	118	6.	-1.941	-2.521	0.580	11	-4.690	-3.813	-0.787	108
63AFB	119	6.	-0.729	-0.935	0.206	42	-0.972	-0.892	-0.888	109
63AAB	120	2.	-2.458	-2.140	-0.318	58	-2.385	-1.503	-0.882	110
63121	121	6.	-1.465	-1.008	-0.457	88	-6.874	-5.119	-0.955	111
63AAA	122	25.	-5.578	-5.189	-0.389	102	-2.468	-1.472	-0.996	112
554LB	123	7.	-1.781	-1.851	0.070	41	-2.588	-1.488	-1.021	113
55AVB	124	18.	-1.672	-1.452	-0.220	108	-6.373	-5.229	-1.144	114
61AAB	125	9.	-2.134	-2.377	0.242	94	-1.853	-0.685	-1.168	115
61AEB	126	11.	-2.716	-3.383	0.667	115	-4.193	-2.965	-1.228	116
62AAB	127	4.	-2.993	-2.529	-0.464	81	-5.585	-4.125	-1.388	117
64211	128	25.	-4.985	-5.249	0.264	111	-4.738	-3.233	-1.497	118


G&H MODEL RUN18 DEP VAR IS LTRAIN
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
SQUARED RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID


B&M MODEL RUN18 DEP VAR IS LTRAIN
RESIDUAL VS. FITTED Y
-6.485
-2.981
8.684
POSITIVE
RESIDUALS
0
NEGATIVE
-6.485
-2.981
8.684
FITTED Y

CP VALUES FOR THE SELECTION OF VARIABLES

O&M MODEL RUN18 DEP VAR 11 LTRAIN SEARCH NUMBER 1

SELECTION OF VARIABLES FOR BASIC EQUATION

CP *274.8, VARIABLE ADDED 21 LUP

CP *229.2, VARIABLE ADDED 7 DI

CP *227.1, VARIABLE ADDED 3 CARNAV

CP *193.6, VARIABLE ADDED 14 MSS

CP *163.9, VARIABLE ADDED 16 OCC

CP * 99.9, VARIABLE ADDED 22 LVO

CP * 91.2, VARIABLE ADDED 12 MEM

CP * 87.5, VARIABLE ADDED 18 MCC

CP * 88.2, VARIABLE ADDED 23 LCC

NUMBER OF OBSERVATIONS	118
NUMBER OF VARIABLES IN FULL EQUATION	24
NUMBER OF VARIABLES IN BASIC EQUATION	7
REMAINDER OF VARIABLES TO BE SEARCHED	17

NUMBER OF VARIABLES REMAINING TO BE SEARCHED IS GREATER THAN 12
USE FRACTIONAL FACTORIAL OPTION TO SOLVE PROBLEM.

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN11 DEP VAR 11 LMHTOT MIN Y = -7,9980 00 MAX Y = -5,4890-01 RANGE = 6,8440 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPOS" MODEL
LMHTOT = B(0) + B(1)FIGSEN + B(2)FIGCOM + B(3)BOMNAV + B(4)BOMCOM
+ B(5)CO + B(6)SS + B(7)MCC + B(8)MOI + B(9)MEM
+ B(10)DUP + B(11)OCC + B(12)DOI + B(13)OEM + B(14)D
+ B(15)DPO + B(16)DUF + B(17)NRTS + B(18)LUP
+ B(19)LVO + B(20)LMT
LMHTOT = LN(MMHTOT)
MMHTOT = TOTAL MAINTENANCE MANHOURS PER OPERATING HOUR

IND,VAR(I)	NAME	COEF,B(I)	S.E. COEF.	T-VALUE	R(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL.INF.X(I)
0		-9,410680 00							
1	FIGSEN	-2,833230-01	1,130-01	1,8	0,3428	0,0	1,0000 00	1,0000 00	0,03
2	FIGCOM	5,452850-01	1,840-01	3,0	0,0872	0,0	1,0000 00	1,0000 00	0,05
3	BOMNAV	6,199330-01	1,360-01	4,6	0,2269	0,0	1,0000 00	1,0000 00	0,09
4	BOMCOM	8,712320-01	1,680-01	4,2	0,1724	0,0	1,0000 00	1,0000 00	0,10
5	CO	2,185190-01	5,270-02	4,2	0,4438	4,9230-03	6,6740 00	6,6690 00	0,22
6	SS	-1,621920-02	1,970-03	8,2	0,6989	0,0	1,0000 02	1,0000 02	0,25
7	MCC	7,834210-05	5,330-05	1,5	0,7485	-1,1680 03	7,1220 03	8,2900 03	0,19
8	MOI	-1,227120-02	1,430-03	8,6	0,4948	-2,4900 01	7,5190 01	1,0080 02	0,19
9	MEM	-2,213910-02	2,360-03	9,4	0,5878	-1,0200 01	8,9980 01	1,0180 02	0,34
10	DUP	6,534460-12	3,810-12	2,2	0,2577	2,2260 07	1,4360 11	1,4360 11	0,14
11	OCC	-3,589280-08	1,260-08	2,8	0,3743	7,2980 02	2,8560 07	2,8560 07	0,16
12	DOI	1,884960-04	6,800-05	1,6	0,2791	1,6800-01	3,8910 03	3,8910 03	0,05
13	OEM	-1,665950-04	7,980-05	2,1	0,1650	2,7940 01	3,8470 03	3,8290 03	0,05
14	DPS	-2,123270-04	1,130-04	1,9	0,2851	9,4260 01	2,8830 03	2,7880 03	0,09
15	DPO	1,762740-07	1,010-07	1,7	0,2988	7,2980 02	4,1890 08	4,1880 08	0,11
16	DUF	3,316740-01	1,320-01	2,5	0,1288	2,8250-01	2,1030 08	2,9980 08	0,10
17	NRTS	-3,988480-03	2,280-03	1,9	0,2975	0,0	1,8880 02	1,8860 02	0,06
18	LUP	5,695820-01	4,490-02	12,7	0,7351	5,6380 08	1,3250 01	8,2170 08	0,72
19	LVO	1,791880-01	1,040-01	1,7	0,9818	3,4810 08	9,8120 08	5,6110 08	0,18
20	LMT	3,136870-01	1,070-01	2,9	0,8939	0,0	5,1570 08	5,1570 08	0,25

NO. OF OBSERVATIONS	119
NO. OF IND. VARIABLES	20
RESIDUAL DEGREES OF FREEDOM	98
F-VALUE	82,4
RESIDUAL ROOT MEAN SQUARE	0,41892549
RESIDUAL MEAN SQUARE	0,17549856
RESIDUAL SUM OF SQUARES	17,19885927
TOTAL SUM OF SQUARES	236,18738456
MULT. CORREL. COEF. SQUARED	,9272

REQUIRED X(I) PRECISION
(DIGIT RIGHT OF DECIMAL POSITIVE,
LEFT OF DECIMAL NEGATIVE)

IND,VAR(I)	DIGIT
1	-1
2	-1
3	-1
4	-1
5	1
6	-2
7	-4
8	-2
9	-2
10	-11
11	-7
12	-4
13	-4
14	-3
15	-6
16	1
17	-2
18	1
19	1
20	1

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN11 DEP VAR 11 LHHTOT RESIDUAL ROOT MEAN SQUARE OF FITTED EQUATION: 0.42

STANDARD DEVIATION ESTIMATED FROM RESIDUALS OF NEIGHBORING OBSERVATIONS (OBSERVATIONS 1 TO 4 APART IN FITTED Y ORDER).

NO.	CUMULATIVE STD DEV	ORDERED BY WSSD: WSSD	OBSV.	OBSV.	DEL RESIDUALS	ORDERED BY FITTED Y: WSSD	DEL RESIDUALS	FITTED Y	OBSV.	SEQ.
1	0.21	0.0	92	91	0.22	45.88	0.14	-6.64	88	1
2	0.31	0.09	65	64	0.42	45.54	0.72	-6.45	117	2
3	0.26	0.06	109	108	0.17	48.66	1.44	-6.34	86	3
4	0.28	0.16	4	128	0.28	13.93	0.85	-6.28	58	4
5	0.23	0.23	53	58	0.06	8.78	0.38	-6.16	126	5
6	0.22	0.33	13	14	0.18	4.36	0.17	-5.92	6	6
7	0.28	0.34	128	31	0.69	62.49	0.28	-5.87	98	7
8	0.32	0.36	59	43	0.58	47.87	0.58	-5.57	38	8
9	0.36	0.51	88	86	0.86	7.91	0.15	-5.56	7	9
10	0.37	0.54	7	16	0.34	6.85	0.49	-5.38	116	10
11	0.40	0.63	49	32	0.64	33.21	0.13	-5.37	16	11
12	0.40	0.64	16	35	0.45	47.18	0.36	-5.35	75	12
13	0.39	0.69	19	114	0.24	57.68	0.48	-5.34	76	13
14	0.41	0.78	2	121	0.77	9.48	0.83	-5.33	79	14
15	0.41	0.78	128	6	0.38	2.13	0.25	-5.11	35	15
16	0.40	0.78	121	101	0.29	18.88	1.82	-5.09	108	16
17	0.42	0.79	19	54	0.73	17.26	0.39	-4.81	112	17
18	0.41	0.79	101	119	0.15	19.98	0.49	-4.63	79	18
19	0.39	0.81	79	71	0.87	29.69	1.16	-4.62	74	19
20	0.37	0.85	86	85	0.81	45.58	0.74	-4.58	111	20
21	0.37	0.85	86	84	0.42	26.18	0.88	-4.56	56	21
22	0.40	0.91	82	17	1.11	6.93	0.89	-4.49	71	22
23	0.41	0.95	117	128	0.67	4.46	1.42	-4.43	11	23
24	0.42	1.83	54	114	0.49	7.81	0.72	-4.24	28	24
25	0.42	1.84	71	81	0.64	3.13	0.44	-4.23	39	25
26	0.41	1.86	10	58	0.86	13.51	0.32	-4.12	81	26
27	0.41	1.19	119	108	0.27	56.78	0.27	-4.05	21	27
28	0.39	1.20	85	37	0.83	48.89	0.19	-4.05	46	28
29	0.39	1.22	15	19	0.46	2.53	0.63	-4.01	9	29
30	0.40	1.27	114	53	0.58	27.17	0.81	-3.97	13	30
31	0.42	1.28	117	6	0.29	23.79	0.19	-3.95	18	31
32	0.39	1.32	37	4	0.82	4.04	0.44	-3.94	68	32
33	0.38	1.32	107	37	0.38	2.65	1.83	-3.90	14	33
34	0.40	1.45	2	101	1.86	12.92	0.38	-3.89	55	34
35	0.40	1.52	85	107	0.33	9.79	0.16	-3.84	33	35
36	0.40	1.55	86	87	0.37	8.89	0.35	-3.82	110	36
37	0.39	1.58	107	4	0.27	3.16	0.39	-3.79	127	37
38	0.41	1.64	54	53	1.86	15.51	0.28	-3.78	120	38
39	0.41	1.67	83	43	0.54	1.22	0.46	-3.74	15	39
40	0.41	1.69	33	127	0.18	28.54	0.01	-3.61	19	40
41	0.40	1.73	1	85	0.25	17.85	0.72	-3.58	5	41
42	0.40	1.74	125	1	0.32	14.93	0.99	-3.56	52	42
43	0.42	1.75	13	55	1.21	11.86	0.49	-3.55	99	43
44	0.43	1.87	31	12	1.88	1.27	0.58	-3.52	114	44
45	0.43	2.03	118	85	0.22	3.52	0.46	-3.49	53	45
46	0.43	2.03	11	39	0.69	13.78	0.52	-3.48	48	46
47	0.43	2.04	58	123	0.12	7.88	0.71	-3.45	104	47
48	0.43	2.04	52	18	0.51	14.42	0.57	-3.39	122	48
49	0.42	2.13	35	108	0.25	2.84	0.12	-3.38	58	49
50	0.44	2.15	59	83	1.12	0.27	0.12	-3.31	123	50
51	0.45	2.16	12	63	1.18	1.74	0.38	-3.31	125	51
52	0.48	2.21	21	13	1.89	4.51	0.47	-3.30	1	52
53	0.45	2.29	87	85	0.36	0.83	0.29	-3.30	116	53
54	0.47	2.29	87	84	0.70	15.26	0.15	-3.24	85	54
55	0.48	2.32	15	94	1.19	34.84	0.28	-3.23	38	55
56	0.49	2.33	31	59	0.94	26.33	0.48	-3.15	3	56
57	0.48	2.36	128	12	0.31	1.32	0.38	-3.14	107	57

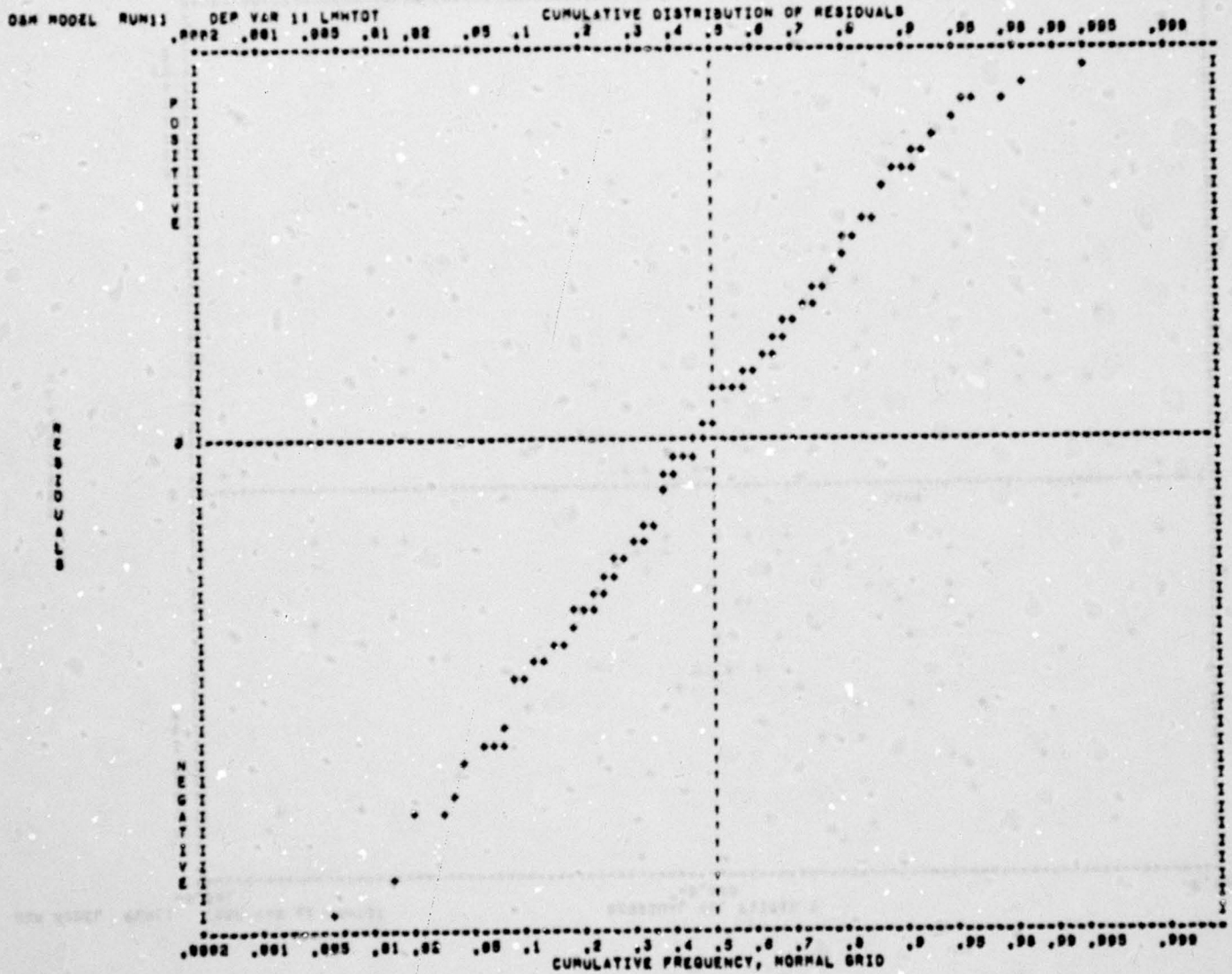
58	0.49	2.39	6	7	0.73	1.32	0.82	-3.14	37	58
59	0.49	2.46	42	61	0.68	11.13	0.28	-3.12	4	59
60	0.49	2.53	9	15	0.63	13.12	0.13	-3.05	69	60
61	0.49	2.62	72	73	0.22	23.41	0.66	-3.04	38	61
62	0.50	2.65	14	55	1.93	16.82	0.23	-2.99	126	62
63	0.49	2.68	120	59	0.25	0.34	0.89	-2.95	128	63
64	0.49	2.91	9	14	0.45	12.86	0.35	-2.92	31	64
65	0.49	2.97	108	79	0.83	19.60	0.85	-2.89	34	65
66	0.49	3.03	54	48	0.61	1.06	0.86	-2.87	12	66
67	0.49	3.03	87	103	0.92	9.26	0.54	-2.84	59	67
68	0.49	3.13	39	81	0.44	13.74	0.58	-2.83	97	68
69	0.48	3.17	103	42	0.27	3.62	0.89	-2.79	83	69
70	0.49	3.18	128	7	1.11	4.31	0.35	-2.78	105	70
71	0.48	3.18	127	126	0.39	10.17	0.34	-2.71	43	71
72	0.49	3.23	21	9	0.48	7.94	0.78	-2.68	98	72
73	0.48	3.24	125	85	0.95	27.85	0.13	-2.67	93	73
74	0.49	3.38	95	32	1.17	56.13	1.98	-2.67	124	74
75	0.49	3.45	108	92	0.66	53.97	0.48	-2.62	44	75
76	0.49	3.52	53	48	0.48	18.22	0.45	-2.61	95	76
77	0.49	3.54	127	5	0.19	11.59	0.87	-2.60	57	77
78	0.49	3.62	83	105	0.89	0.63	0.84	-2.60	49	78
79	0.50	3.65	17	82	0.83	23.86	1.17	-2.52	32	79
80	0.50	3.72	48	58	0.38	35.17	0.18	-2.49	28	80
81	0.50	3.74	13	66	0.62	15.17	0.58	-2.44	66	81
82	0.50	3.76	89	105	0.23	15.11	0.56	-2.44	24	82
83	0.49	3.79	11	81	0.25	2.29	0.38	-2.41	87	83
84	0.49	3.85	49	66	0.36	0.88	0.42	-2.39	85	84
85	0.49	3.93	42	26	0.71	10.44	0.15	-2.39	64	85
86	0.50	3.93	25	27	0.88	18.72	0.73	-2.38	52	86
87	0.49	3.98	9	68	0.91	8.19	0.45	-2.33	41	87
88	0.49	3.98	35	79	0.38	29.69	0.68	-2.31	113	88
89	0.49	4.04	27	83	0.68	13.68	0.45	-2.31	2	89
90	0.49	4.12	95	49	0.53	18.56	0.31	-2.22	18	90
91	0.49	4.26	104	125	0.14	13.32	0.48	-2.22	121	91
92	0.48	4.28	114	48	0.12	13.32	0.77	-2.19	78	92
93	0.48	4.31	105	45	0.35	51.59	0.25	-2.18	101	93
94	0.48	4.36	6	98	0.17	29.55	0.99	-2.17	51	94
95	0.49	4.41	32	66	1.91	31.91	0.31	-2.16	48	95
96	0.49	4.46	11	28	1.42	16.96	0.35	-2.15	119	96
97	0.49	4.58	105	124	0.22	32.42	0.69	-2.13	98	97
98	0.49	4.61	1	118	0.47	69.97	0.77	-2.10	80	98
99	0.49	4.64	68	14	0.44	55.59	0.33	-2.04	109	99
100	0.49	4.88	115	107	0.55	33.61	1.23	-2.03	17	100
101	0.49	4.33	71	39	0.29	10.61	1.93	-2.00	94	101
102	0.49	4.86	32	87	0.64	38.98	0.79	-1.94	100	102
103	0.49	5.02	12	105	0.29	11.67	0.84	-1.88	29	103
104	0.49	5.37	96	95	0.38	5.88	0.76	-1.73	82	104
105	0.49	5.38	128	98	0.55	51.37	0.76	-1.61	25	105
106	0.49	5.48	84	77	0.39	0.8	0.20	-1.58	92	106
107	0.48	5.49	99	104	0.14	37.87	0.33	-1.58	91	107
108	0.48	5.54	20	21	0.85	4.04	0.68	-1.54	27	108
109	0.49	5.57	38	126	0.28	47.15	0.57	-1.47	83	109
110	0.48	5.85	88	33	0.21	2.62	0.22	-1.33	72	110
111	0.48	5.86	84	89	0.73	39.67	0.89	-1.29	73	111
112	0.49	5.86	82	25	0.76	11.94	1.22	-1.22	103	112
113	0.48	5.88	92	72	0.98	5.88	0.73	-1.21	84	113
114	0.48	5.88	91	74	0.22	6.86	0.57	-1.17	89	114
115	0.49	5.88	83	103	0.78	12.79	0.93	-1.14	42	115
116	0.48	5.89	91	73	0.44	13.95	0.93	-1.08	77	116
117	0.48	5.98	98	20	0.92	8.87	0.11	-0.88	81	117
118	0.48	5.98	82	27	0.12	9.33	0.89	-0.87	25	118
119	0.48	6.06	89	48	0.57	6.81	0.88	-0.85	88	119

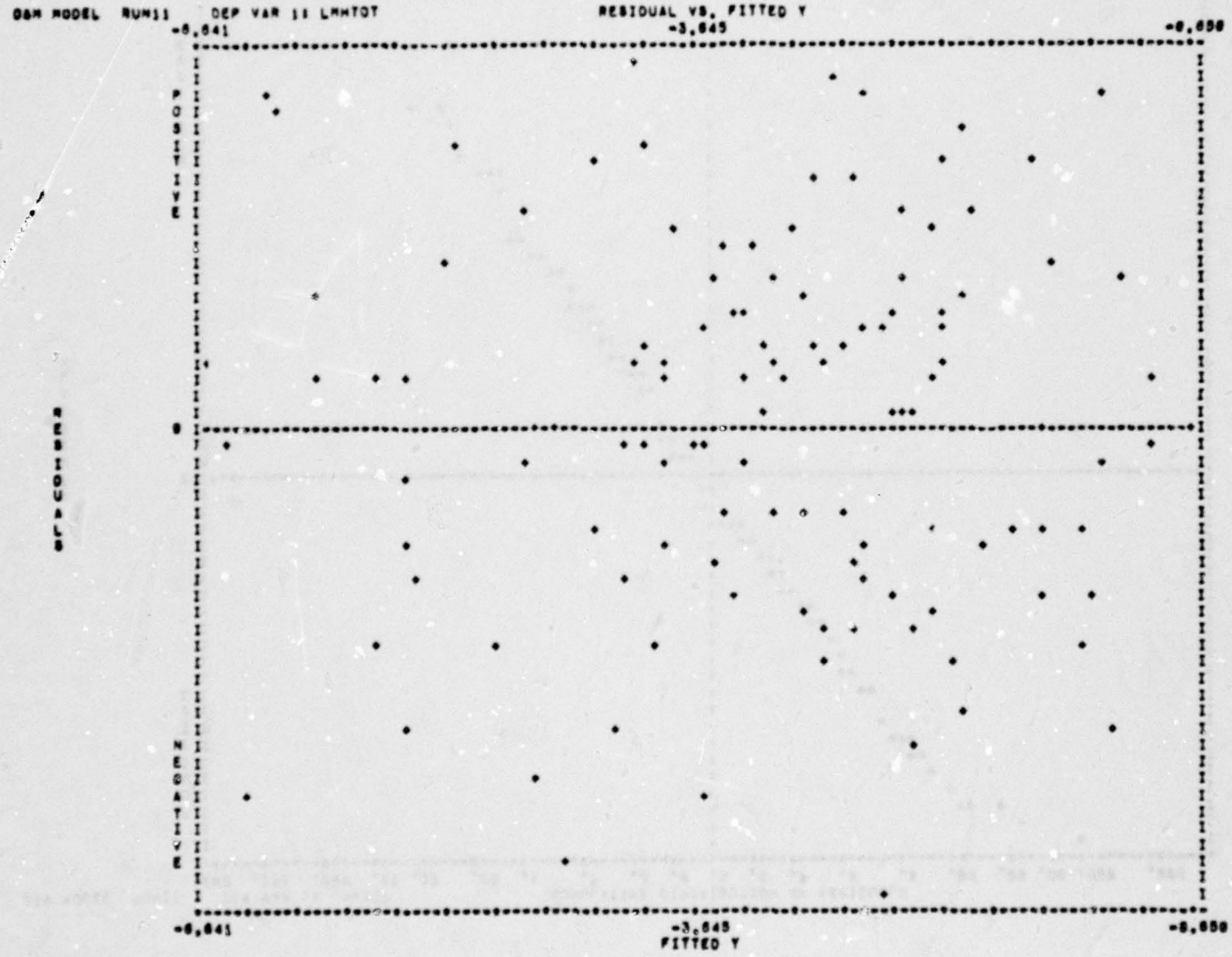
LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN11 DEP VAR IS LMHTOT

IDENT,	OBSV,	WSS	ORDERED BY COMPUTER INPUT: DISTANCE	OBS, Y	FITTED Y	RESIDUAL	OBSV,	OBS, Y	FITTED Y	ORDERED RESID,	SEQ
71A20	1		1,	-3,385	-3,394	-0,008	13	-3,292	-3,969	0,766	1
71L00	2		0,	-2,971	-2,389	-0,663	63	-2,980	-2,788	0,699	2
71M00	3		2#,	-2,855	-3,147	0,293	50	-5,499	-6,195	0,697	3
71P40	4		2,	-3,009	-3,120	0,111	44	-1,947	-2,615	0,668	4
71P80	5		7,	-3,837	-3,782	-0,055	84	-0,546	-1,211	0,665	5
71710	6		16,	-5,661	-5,923	0,262	126	-5,520	-6,164	0,644	6
72400	7		12,	-6,023	-5,559	-0,465	17	-1,425	-2,032	0,607	7
71FA0	8		3,	-3,875	-4,012	0,137	14	-3,314	-3,992	0,598	8
71F80	10		14,	-3,992	-3,949	-0,042	108	-4,585	-5,075	0,578	9
71CA0	11		4,	-5,320	-4,434	-0,887	119	-1,681	-2,147	0,546	10
71D40	12		5,	-3,344	-2,866	-0,478	25	-1,070	-1,618	0,547	11
51EA0	13		5,	-3,282	-3,969	0,788	20	-3,710	-4,239	0,529	12
52AA0	14		9,	-3,314	-3,992	0,588	31	-2,399	-2,921	0,522	13
52480	15		8,	-3,322	-3,739	0,417	96	-2,179	-2,676	0,497	14
63B00	16		16,	-5,497	-5,371	-0,126	64	-1,943	-2,388	0,445	15
71AE0	17		19,	-1,425	-2,032	0,607	100	-1,498	-1,936	0,438	16
74JA0	18		9,	-2,432	-2,222	-0,210	74	-4,187	-4,616	0,429	17
74JC0	19		6,	-3,649	-3,605	-0,044	15	-3,322	-3,739	0,417	18
32GA1	20		1,	-3,710	-4,239	0,529	80	-2,653	-3,049	0,395	19
71ZA0	21		5,	-4,388	-4,048	-0,320	101	-1,787	-2,179	0,393	20
73EG0	24		11,	-2,216	-2,437	0,221	118	-2,911	-3,296	0,386	21
73EP0	25		22,	-1,870	-1,618	0,548	104	-3,897	-3,454	0,357	22
73H40	26		22,	-0,793	-0,873	0,081	83	-1,132	-1,470	0,338	23
73HC0	27		13,	-1,879	-1,541	-0,338	35	-4,783	-5,107	0,324	24
73N40	28		27,	-2,382	-2,490	0,108	53	-3,184	-3,486	0,302	25
73080	29		11,	-2,137	-1,878	-0,259	77	-0,785	-1,093	0,298	26
733C0	30		12,	-3,217	-3,239	0,013	52	-2,081	-2,378	0,297	27
73K80	31		2,	-2,399	-2,921	0,522	3	-2,855	-3,147	0,293	28
73KE0	32		3,	-3,494	-2,517	-0,978	109	-1,765	-2,037	0,273	29
73KF0	33		3,	-3,998	-3,838	-0,884	38	-2,739	-3,004	0,265	30
73KK0	34		11,	-2,729	-2,894	0,174	8	-5,661	-5,923	0,262	31
75930	35		0,	-4,793	-5,107	0,324	48	-1,925	-2,157	0,232	32
74800	36		5,	-2,739	-3,004	0,265	24	-2,216	-2,437	0,221	33
74AF0	37		3,	-3,081	-3,137	0,136	125	-3,088	-3,307	0,219	34
74810	38		35,	-5,473	-5,567	0,094	58	-3,145	-3,353	0,210	35
76410	39		8,	-4,428	-4,238	-0,190	99	-3,338	-3,552	0,214	36
75GA0	40		9,	-3,618	-3,457	-0,161	95	-2,424	-2,613	0,193	37
74FF0	41		27,	-2,759	-2,327	-0,433	99	-1,949	-2,131	0,191	38
74F40	42		17,	-1,775	-1,143	-0,632	28	-2,302	-2,490	0,188	39
74FH0	43		5,	-2,553	-2,712	0,159	34	-2,729	-2,894	0,174	40
74FU0	44		47,	-1,947	-2,615	0,668	85	-3,071	-3,239	0,168	41
73CG0	46		27,	-4,897	-4,947	-0,050	43	-2,553	-2,712	0,159	42
74FC0	48		12,	-1,925	-2,157	0,232	68	-3,792	-3,943	0,151	43
74FJ0	49		3,	-2,929	-2,596	-0,333	51	-2,819	-2,165	0,146	44
74FK0	50		9,	-5,499	-6,195	0,697	126	-3,648	-3,788	0,140	45
74FQ0	51		27,	-2,819	-2,165	0,146	9	-3,875	-4,012	0,137	46
74AA0	52		7,	-2,881	-2,378	0,297	37	-3,081	-3,137	0,136	47
74ACP	53		7,	-3,184	-3,486	0,302	97	-2,717	-2,833	0,116	48
74CA0	54		5,	-4,333	-3,568	-0,775	88	-6,526	-6,641	0,115	49
74C80	55		7,	-4,330	-3,888	-0,442	4	-3,989	-3,120	0,111	50
74CC0	56		7,	-4,558	-4,557	0,000	121	-2,115	-2,219	0,103	51
74F41	57		9,	-2,659	-2,597	-0,062	110	-3,722	-3,820	0,098	52
74E80	58		8,	-3,145	-3,363	0,218	123	-3,217	-3,315	0,098	53
73PH0	59		4,	-3,257	-2,837	-0,420	78	-5,245	-5,342	0,097	54
73P80	60		36,	-5,857	-5,558	-0,297	38	-5,473	-5,567	0,094	55
73P00	61		18,	-5,818	-5,877	0,059	98	-5,777	-5,871	0,093	56
73PF0	62		23,	-2,883	-2,184	-0,699	26	-0,793	-0,873	0,081	57
73PH0	63		5,	-2,969	-2,788	0,199	80	-2,418	-2,444	0,027	58
7CNA0	64		4,	-1,943	-2,388	0,445	65	-2,388	-2,389	0,001	59
710J0	65		4,	-2,388	-2,389	0,021	113	-2,293	-2,311	0,019	60

63AA8	85	3.	-2,410	-2,444	0,027	38	-3,217	-3,230	0,013	61
65AA9	87	4.	-2,752	-2,418	-0,342	56	-4,550	-4,557	0,008	62
63AG8	88	4.	-3,792	-3,943	0,151	71	-4,488	-4,494	0,006	63
63AF8	70	14.	-5,831	-5,329	-0,302	60	-8,657	-8,658	-0,007	64
71A8E	71	14.	-4,488	-4,494	0,006	91	-1,565	-1,557	-0,008	65
71ADA	72	17.	-1,556	-1,326	-0,230	117	-8,471	-8,446	-0,026	66
73D8A	73	10.	-1,737	-1,298	-0,440	61	-8,910	-8,877	-0,033	67
71ACC	74	51.	-4,187	-4,810	0,429	10	-3,992	-3,949	-0,042	68
73CBQ	75	94.	-5,813	-5,354	-0,259	19	-3,049	-3,005	-0,044	69
73CEM	76	46.	-8,845	-8,342	0,007	48	-4,887	-4,847	-0,050	70
73CFK	77	6.	-0,785	-1,883	0,298	5	-3,637	-3,582	-0,055	71
73D4M	78	21.	-2,594	-2,189	-0,374	79	-4,687	-4,626	-0,061	72
73E8A	79	14.	-4,887	-4,826	-0,861	80	-1,231	-1,168	-0,064	73
73E8F	8Z	10.	-2,853	-3,949	0,395	33	-3,998	-3,836	-0,064	74
71C48	81	10.	-4,754	-4,117	-0,638	1	-3,385	-3,384	-0,080	75
73E6P	82	15.	-1,949	-1,738	-0,219	16	-5,497	-5,371	-0,126	76
73MC8	83	14.	-1,132	-1,470	0,338	48	-3,618	-3,457	-0,161	77
73L4R	84	8.	-0,568	-1,211	0,665	107	-3,300	-3,138	-0,162	78
77EC8	85	2.	-3,971	-3,239	0,168	129	-3,116	-2,951	-0,167	79
77EEP	86	47.	-7,998	-8,342	-0,748	105	-2,948	-2,756	-0,191	80
77D8P	86	48.	-8,526	-8,641	0,115	39	-4,426	-4,238	-0,188	81
78AEA	89	8.	-1,231	-1,168	-0,064	18	-2,432	-2,222	-0,210	82
73MA8	90	6.	-1,948	-2,131	0,191	82	-1,949	-1,730	-0,219	83
638AA	91	11.	-1,565	-1,557	-0,008	92	-1,782	-1,557	-0,225	84
63CAA	92	11.	-1,782	-1,557	-0,225	72	-1,558	-1,326	-0,230	85
68BAA	93	8.	-2,952	-2,668	-0,283	127	-4,839	-3,791	-0,249	86
61884	94	5.	-2,598	-1,999	-0,597	29	-2,137	-1,878	-0,259	87
61AAP	95	6.	-2,428	-3,813	0,193	75	-5,613	-5,354	-0,259	88
61A8A	96	6.	-2,179	-2,676	0,497	37	-2,859	-2,597	-0,262	80
614C8	97	7.	-2,717	-2,833	0,116	114	-3,891	-3,521	-0,288	90
72AA8	98	29.	-5,777	-5,871	0,093	93	-2,952	-2,869	-0,283	91
72AC8	99	6.	-3,338	-3,552	0,214	78	-5,631	-5,329	-0,302	92
71CAP	100	14.	-1,498	-1,936	0,438	21	-4,368	-4,048	-0,320	93
72EAA	101	10.	-1,787	-2,179	0,393	49	-2,928	-2,596	-0,333	94
728P0	103	28.	-1,579	-1,221	-0,358	27	-1,679	-1,541	-0,338	95
71JA8	104	3.	-3,897	-3,454	0,357	87	-2,752	-2,410	-0,342	96
71LAP	105	5.	-2,948	-2,756	-0,191	122	-3,744	-3,394	-0,351	97
720NP	106	13.	-3,392	-2,993	-0,399	103	-1,579	-1,221	-0,358	98
72AC8	107	2.	-3,304	-3,138	-0,162	78	-2,564	-2,189	-0,374	99
71716	108	12.	-4,585	-5,075	0,570	106	-3,392	-2,993	-0,399	100
71310	109	15.	-1,765	-2,037	0,273	124	-3,074	-2,665	-0,438	101
72MF8	110	13.	-3,722	-3,822	0,098	59	-3,257	-2,837	-0,420	102
72480	111	26.	-5,325	-4,597	-0,729	41	-2,760	-2,327	-0,433	103
71JCE	112	12.	-5,265	-4,815	-0,450	55	-4,330	-3,888	-0,442	104
72AE8	113	14.	-2,293	-2,311	0,019	73	-1,737	-1,290	-0,448	105
72CCP	114	4.	-3,881	-3,521	-0,360	112	-5,265	-4,815	-0,450	106
[illegible]28A	116	14.	-8,892	-5,384	-0,617	7	-8,923	-8,559	-0,463	107
71IDP	117	24.	-8,471	-8,446	-0,026	12	-3,344	-2,866	-0,478	108
6583A	118	4.	-2,511	-3,296	0,386	62	-2,683	-2,184	-0,499	109
634F8	119	9.	-1,681	-2,147	0,566	94	-2,396	-1,999	-0,597	110
63AA8	120	2.	-3,118	-2,951	-0,167	116	-6,002	-5,384	-0,617	111
63121	121	9.	-2,118	-2,219	0,103	42	-1,775	-1,143	-0,632	112
63AAA	122	11.	-3,748	-3,394	-0,351	81	-4,754	-4,117	-0,638	113
55ALP	123	6.	-3,817	-3,315	0,498	2	-2,971	-2,389	-0,683	114
55AV8	124	13.	-3,874	-2,665	-0,408	111	-5,325	-4,597	-0,729	115
61AA8	125	3.	-3,888	-3,387	0,219	86	-7,890	-8,342	-0,748	116
61AE8	126	6.	-3,648	-3,788	0,140	84	-4,235	-3,588	-0,775	117
62AA8	127	5.	-4,039	-3,791	-0,249	11	-5,328	-4,434	-0,687	118
64211	128	10.	-9,028	-8,184	0,844	32	-3,494	-8,317	-0,978	119


O&M MODEL RUN11 DEP VAR 11 LMHTOT
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID


O&M MODEL RUN11 DEP VAR is LMHTOT
RESIDUAL VS. FITTED Y
-8.641
-3.645
-8.650
POSITIVE
0
NEGATIVE
RESIDUALS
-8.641
-3.645
-8.650
FITTED Y

CP VALUES FOR THE SELECTION OF VARIABLES

O&M MODEL RUN11 DEP VAR 11 LMHTOT SEARCH NUMBER 1

SELECTION OF VARIABLES FOR BASIC EQUATION

CP =889.2, VARIABLE ADDED 18 LUP

CP =919.1, VARIABLE ADDED 9 MEM

CP =444.8, VARIABLE ADDED 8 MOI

CP =221.5, VARIABLE ADDED 6 SS

CP =286.7, VARIABLE ADDED 3 BOMNAV

CP =193.6, VARIABLE ADDED 4 BOMCOM

CP =172.2, VARIABLE ADDED 5 CD

CP =158.2, VARIABLE ADDED 2 FIGCOM

CP = 55.2, VARIABLE ADDED 20 LWT

CP = 43.3, VARIABLE ADDED 11 DCC

CP = 41.2, VARIABLE ADDED 16 DUP

CP = 39.6, VARIABLE ADDED 10 DUP

CP = 33.4, VARIABLE ADDED 13 DEM

CP = 30.9, VARIABLE ADDED 17 NRTS

CP = 25.3, VARIABLE ADDED 14 DPS

CP = 25.9, VARIABLE ADDED 1 FIGSEN

NUMBER OF OBSERVATIONS 119
NUMBER OF VARIABLES IN FULL EQUATION 20
NUMBER OF VARIABLES IN BASIC EQUATION 14
REMAINDER OF VARIABLES TO BE SEARCHED 0

EQUATION	P	CP	VARIABLES IN EQUATION
	21	21.0	FULL EQUATION
	15	30.9	BASIC SET OF VARIABLES 2 FIGCOM, 3 BOMNAV, 4 BOMCOM, 5 CD, 6 SS, 8 MOI, 9 MEM, 10 DUP, 11 DCC, 13 DEM, 16 DUP, 17 NRTS, 18 LUP, 20 LWT RMS = 0.20234
1	16	23.8	BASIC SET PLUS 1 FIGSEN, 7 MCC, 12 DOI, 14 DPS RMS = 0.19248
2	16	22.8	BASIC SET PLUS 7 MCC, 12 DOI, 14 DPS, 15 DPD RMS = 0.19212

3	20	22.0	BASIC SET PLUS			1 FIGSEN		7 MCC		12 DDI		14 DPS		15 DPD		19 LVD	
			RMS =	0.17897													
4	18	22.8	BASIC SET PLUS			1 FIGSEN		15 DPD		19 LVD							
			RMS =	0.18348													
5	19	22.4	BASIC SET PLUS			1 FIGSEN		7 MCC		15 DPD		19 LVD					
			RMS =	0.18153													
6	20	22.5	BASIC SET PLUS			1 FIGSEN		7 MCC		12 DDI		15 DPD		19 LVD			
			RMS =	0.18098													
7	19	22.8	BASIC SET PLUS			1 FIGSEN		12 DDI		15 DPD		19 LVD					
			RMS =	0.18089													
8	19	22.8	BASIC SET PLUS			12 DDI		14 DPS		15 DPD		19 LVD					
			RMS =	0.18217													
9	20	21.2	BASIC SET PLUS			1 FIGSEN		12 DDI		14 DPS		15 DPD		19 LVD			
			RMS =	0.17755													
10	81	21.8	BASIC SET PLUS			1 FIGSEN		7 MCC		12 DDI		14 DPS		15 DPD		19 LVD	
			RMS =	0.17550													
11	20	22.2	BASIC SET PLUS			7 MCC		12 DDI		14 DPS		15 DPD		19 LVD			
			RMS =	0.17940													
12	19	21.8	BASIC SET PLUS			7 MCC		14 DPS		15 DPD		19 LVD					
			RMS =	0.18048													
13	21	21.5	BASIC SET PLUS			1 FIGSEN		7 MCC		14 DPS		15 DPD		19 LVD			
			RMS =	0.17818													
14	19	22.5	BASIC SET PLUS			1 FIGSEN		14 DPS		15 DPD		19 LVD					
			RMS =	0.18179													
15	17	22.8	BASIC SET PLUS			14 DPS		19 LVD									
			RMS =	0.18589													
16	18	22.7	BASIC SET PLUS			1 FIGSEN		14 DPS		19 LVD							
			RMS =	0.18358													
17	19	22.4	BASIC SET PLUS			1 FIGSEN		7 MCC		14 DPS		19 LVD					
			RMS =	0.18158													
18	18	22.1	BASIC SET PLUS			7 MCC		14 DPS		19 LVD							
			RMS =	0.18258													

19	19	22.5	BASIC SET PLUS			MCC 7		DDI 12		DPS 14		LVO 19
			RMS =	0.18181								
20	20	22.8	BASIC SET PLUS		FIGSEN 1		MCC 7		DDI 12		DPS 14	LVO 19
			RMS =	0.17988								
21	19	21.5	BASIC SET PLUS		FIGSEN 1		DDI 12		DPS 14		LVO 19	
			RMS =	0.17998								
22	18	22.4	BASIC SET PLUS			DDI 12		DPS 14		LVO 19		
			RMS =	0.18318								
23	18	22.8	BASIC SET PLUS		FIGSEN 1		DDI 12		LVO 19			
			RMS =	0.18384								

SWEEP NUMBER 63, DELTA Z(K,K) = 2.D-16

ESTIMATE OF VARIANCE

NO SMALLER RMS VALUE FOUND IN SUBSET EQUATIONS

RMS OF FULL EQUATION SELECTED BY USER TO CALCULATE CP VALUES

SEQ	EQUATION	P	ORDERED CP
1	10	21	21.0
2	9	20	21.2
3	13	20	21.5
4	21	19	21.5
5	12	19	21.8
6	7	19	22.0
7	3	20	22.0
8	20	20	22.0
9	18	18	22.1
10	11	20	22.2
11	22	18	22.4
12	17	19	22.4
13	5	19	22.4
14	19	19	22.5
15	14	19	22.5
16	6	20	22.5
17	15	17	22.6
18	4	18	22.6
19	16	18	22.7
20	2	19	22.8
21	23	18	22.8
22	8	19	22.8
23	1	19	23.0

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

D&R MODEL RUN18 DEP VAR 1: LMHSHO MIN Y = -9.2910 00 MAX Y = -8.2720-01 RANGE Y = 8.2640 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPOS" MODEL

LMHSHO = B(0) + B(1)FIGCOM + B(2)BOMNAV + B(3)BOMCOM + B(4)DI
+ B(5)PS + B(6)SS + B(7)MCD + B(8)MEM + B(9)DUP
+ B(10)DCD + B(11)DEM + B(12)NRTS + B(13)LUP + B(14)LVD

LMHSHO = LN(MMHSHO)

MMHSHO = SHOP MAINTENANCE MANHOURS PER OPERATING HOUR

IND.VAR(I)	NAME	COEF.B(I)	S.E. COEF.	T-VALUE	R(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL.INF.X(I)
0		-1.122330 01							
1	FIGCOM	7.697730-01	2.370-01	3.2	0.7932	0.0	1.0000 00	1.0000 00	0.09
2	BOMNAV	3.891690-01	1.780-01	2.3	0.1864	0.0	1.0000 00	1.0000 00	0.05
3	BOMCOM	8.432150-01	1.990-01	4.2	0.1218	0.0	1.0000 00	1.0000 00	0.10
4	DI	-1.678640-02	1.750-03	9.6	0.4485	0.0	1.0000 02	1.0000 02	0.28
5	PS	-5.997730-03	2.880-03	2.1	0.0874	0.0	1.0000 02	1.0000 02	0.07
6	SS	-1.866130-02	2.380-03	7.8	0.5523	0.0	1.0000 02	1.0000 02	0.23
7	MCD	3.135260-01	5.060-02	6.2	0.3496	-1.2150 00	5.4540 00	6.6690 00	0.25
8	MEM	-3.832620-02	3.870-03	9.9	0.6074	-1.0200 01	8.9800 01	1.0000 02	0.37
9	DUP	6.921740-12	3.720-12	1.9	0.2006	2.2260 07	1.4360 11	1.4360 11	0.12
10	DCD	-5.783970-02	2.530-02	2.3	0.3082	1.7840-04	1.0610 01	1.0610 01	0.13
11	DEM	-2.938680-04	9.950-05	3.0	0.1318	2.7840 01	3.0470 03	3.0200 03	0.11
12	NRTS	-6.567230-03	2.620-03	2.5	0.2675	0.0	1.0000 02	1.0000 02	0.00
13	LUP	6.525180-01	5.580-02	11.9	0.7087	8.0300 00	1.3250 01	0.2170 00	0.05
14	LVD	5.552690-01	6.550-02	8.5	0.5895	3.4010 00	9.0120 00	5.6110 00	0.30

NO. OF OBSERVATIONS	119
NO. OF IND. VARIABLES	14
RESIDUAL DEGREES OF FREEDOM	104
F-VALUE	59.6
RESIDUAL ROOT MEAN SQUARE	0.53865392
RESIDUAL MEAN SQUARE	0.29014885
RESIDUAL SUM OF SQUARES	30.17539672
TOTAL SUM OF SQUARES	312.78847537
MULT. CORREL. COEF. SQUARED	.9038

REQUIRED X(I) PRECISION
(DIGIT RIGHT OF DECIMAL POSITIVE,
LEFT OF DECIMAL NEGATIVE)

IND.VAR(I)	DIGIT
1	-1
2	-1
3	-1
4	-2
5	-2
6	-2
7	1
8	-2
9	-11
10	-1
11	-4
12	-2
13	1
14	1

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

D&M MODEL RUN12 DEP VAR IS LMMSMO RESIDUAL ROOT MEAN SQUARE OF FITTED EQUATIONS 0.84

STANDARD DEVIATION ESTIMATED FROM RESIDUALS OF NEIGHBORING OBSERVATIONS (OBSERVATIONS 1 TO 4 APART IN FITTED Y ORDER).

NO.	CUMULATIVE STD DEV	ORDERED BY WSSD WSSD	OBSV.	OBSV.	DEL RESIDUALS	ORDERED BY FITTED Y WSSD	DEL RESIDUALS	FITTED Y	OBSV.	SEQ.
1	0.19	0.0	92	91	0.20	0.04	1.08	-8.36	88	1
2	0.26	0.00	65	64	0.40	4.13	1.15	-7.87	66	2
3	0.26	0.04	109	108	0.22	47.88	0.71	-7.26	78	3
4	0.30	0.18	48	14	0.81	0.92	0.41	-7.16	128	4
5	0.33	0.23	16	35	0.10	10.51	0.54	-7.16	117	5
6	0.29	0.27	4	85	0.11	12.96	0.12	-7.03	56	6
7	0.27	0.27	13	14	0.13	54.63	0.78	-6.89	8	7
8	0.23	0.28	53	58	0.05	62.48	0.57	-6.63	38	8
9	0.24	0.29	24	113	0.29	15.84	0.93	-6.37	75	9
10	0.39	0.32	56	13	1.00	13.07	1.02	-6.36	98	10
11	0.43	0.33	56	48	0.06	7.19	0.87	-6.06	110	11
12	0.43	0.38	52	89	0.50	10.22	0.26	-6.05	78	12
13	0.48	0.48	37	120	0.07	0.71	0.75	-5.91	16	13
14	0.38	0.51	85	120	0.04	1.07	1.43	-5.76	7	14
15	0.48	0.52	7	35	0.05	2.56	0.58	-5.62	108	15
16	0.43	0.58	48	13	0.04	13.48	0.53	-5.47	35	16
17	0.42	0.58	4	37	0.14	34.38	1.21	-5.38	112	17
18	0.48	0.61	59	32	0.21	16.82	0.94	-5.33	74	18
19	0.42	0.62	114	54	0.75	0.99	0.57	-5.32	79	19
20	0.49	0.62	54	57	1.65	23.49	1.95	-5.22	71	20
21	0.48	0.67	66	65	0.01	29.68	0.95	-5.16	111	21
22	0.45	0.67	66	64	0.38	48.68	0.31	-5.04	20	22
23	0.46	0.68	19	114	0.81	56.59	1.27	-5.03	46	23
24	0.45	0.70	85	37	0.03	0.97	0.11	-4.98	21	24
25	0.46	0.71	16	7	0.75	13.15	0.23	-4.98	11	25
26	0.44	0.72	119	108	0.10	0.33	0.86	-4.88	56	26
27	0.49	0.81	41	25	1.49	10.93	0.61	-4.88	48	27
28	0.49	0.82	123	114	0.85	14.65	1.55	-4.77	81	28
29	0.51	0.84	88	86	1.06	28.98	1.05	-4.74	13	29
30	0.50	0.87	119	109	0.33	30.68	0.92	-4.67	10	30
31	0.51	0.88	63	49	0.74	2.32	1.48	-4.67	14	31
32	0.49	0.90	19	123	0.84	24.21	0.19	-4.66	55	32
33	0.49	0.92	128	117	0.41	25.57	0.52	-4.65	122	33
34	0.48	0.99	37	12	0.26	23.10	0.15	-4.54	118	34
35	0.49	0.99	79	71	0.57	5.96	0.49	-4.48	9	35
36	0.51	1.07	7	108	1.43	19.84	1.66	-4.43	15	36
37	0.50	1.20	1	107	0.17	7.27	0.97	-4.36	39	37
38	0.50	1.30	117	6	0.42	6.61	0.48	-4.26	88	38
39	0.49	1.45	108	6	0.01	12.32	0.54	-4.23	33	39
40	0.49	1.46	108	79	0.84	0.98	0.04	-4.22	19	40
41	0.50	1.54	30	58	0.68	10.31	0.52	-4.22	123	41
42	0.52	1.54	13	55	1.61	12.36	0.33	-4.14	127	42
43	0.52	1.67	39	33	0.59	10.39	0.02	-4.06	114	43
44	0.51	1.73	33	127	0.06	10.43	1.37	-4.04	5	44
45	0.51	1.78	125	1	0.52	10.11	1.16	-4.03	54	45
46	0.51	1.88	103	26	0.56	5.71	0.43	-4.02	126	46
47	0.53	1.82	123	54	1.60	15.29	0.08	-3.95	99	47
48	0.52	1.85	59	12	0.05	14.68	0.35	-3.90	118	48
49	0.52	1.87	35	79	0.28	3.82	0.83	-3.86	57	49
50	0.53	1.89	55	15	1.30	2.28	0.88	-3.83	53	50
51	0.53	1.91	11	81	0.46	1.54	0.68	-3.82	30	51
52	0.52	1.91	57	58	0.03	11.68	0.03	-3.81	58	52
53	0.51	1.91	12	32	0.16	3.76	0.21	-3.71	104	53
54	0.51	1.93	129	12	0.33	15.18	0.47	-3.70	125	54
55	0.51	2.00	15	19	0.62	11.76	0.99	-3.69	94	55
56	0.51	2.07	18	52	0.37	0.69	0.69	-3.69	1	56
57	0.51	2.29	119	101	0.46	32.48	0.96	-3.65	88	57

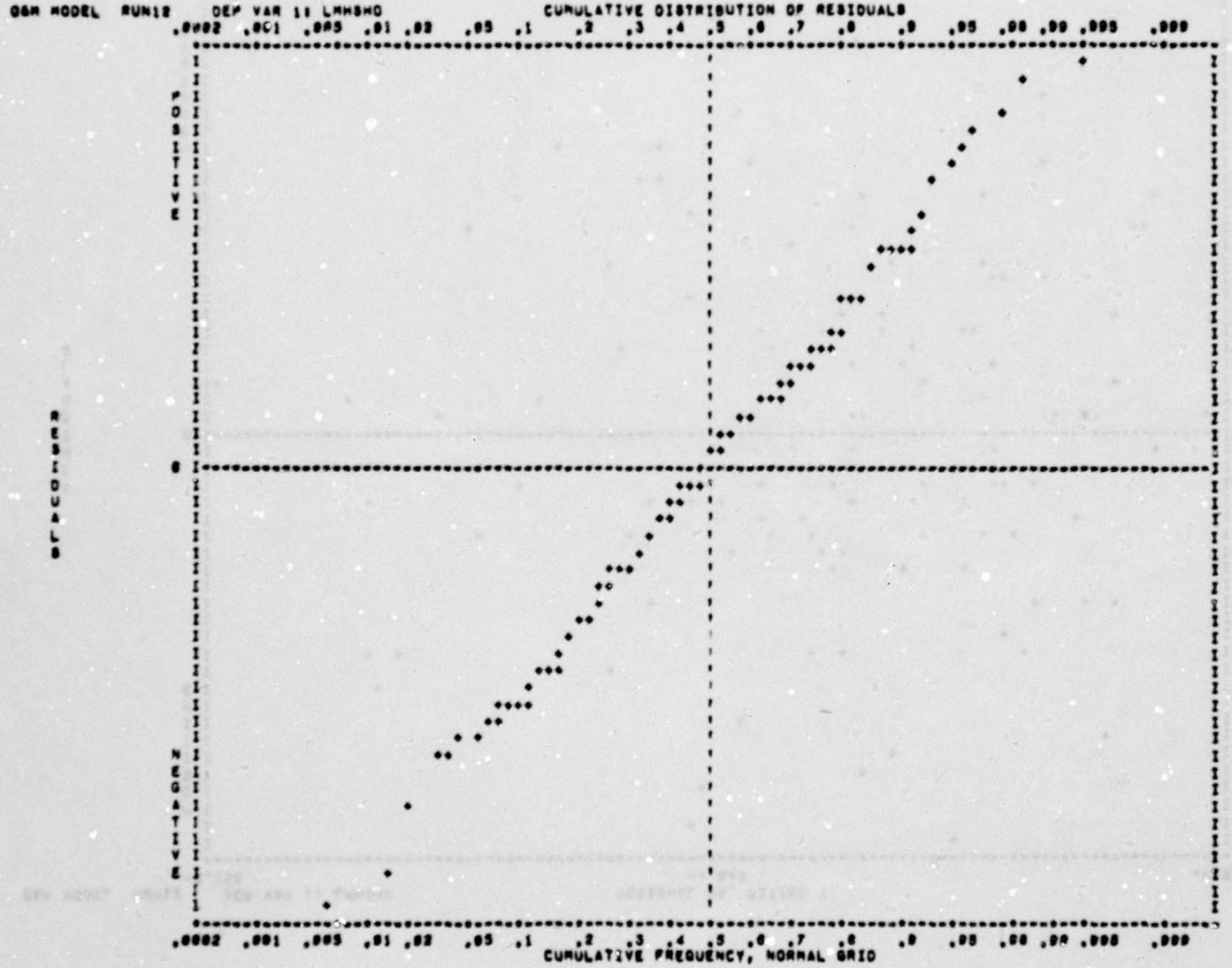
58	0,51	2,22	21	49	0,98	12,64	0,44	-3,63	124	58
59	0,52	2,28	53	38	0,66	9,72	0,25	-3,62	107	59
60	0,51	2,30	27	83	0,48	29,63	0,14	-3,62	4	60
61	0,53	2,32	14	55	1,48	24,98	0,25	-3,57	3	61
62	0,53	2,47	5	110	0,63	13,66	0,07	-3,57	85	62
63	0,53	2,48	104	1	0,73	12,78	0,64	-3,53	106	63
64	0,53	2,49	37	59	0,22	7,63	1,88	-3,51	37	64
65	0,53	2,50	108	35	0,50	7,38	0,99	-3,48	96	65
66	0,53	2,50	27	25	0,97	3,83	0,28	-3,45	120	66
67	0,53	2,72	107	4	0,85	1,85	0,05	-3,36	59	67
68	0,52	2,74	88	76	0,07	1,01	0,16	-3,35	12	68
69	0,52	2,76	109	101	0,36	44,54	1,47	-3,31	32	69
70	0,53	2,86	61	103	1,19	55,92	0,07	-3,27	40	70
71	0,52	2,37	109	101	0,14	22,16	0,01	-3,25	24	71
72	0,51	2,88	103	42	0,13	14,48	0,27	-3,24	38	72
73	0,51	2,91	1	4	0,42	39,25	0,57	-3,21	28	73
74	0,51	2,96	29	52	0,04	12,37	0,48	-3,19	113	74
75	0,51	2,98	16	108	0,68	5,44	0,48	-3,18	43	75
76	0,52	3,02	57	53	0,03	13,48	0,11	-3,13	105	76
77	0,52	3,03	129	59	0,28	4,77	0,32	-3,08	93	77
78	0,51	3,05	29	11	1,07	7,66	0,08	-3,07	31	78
79	0,50	3,09	21	56	0,12	17,98	1,14	-2,83	95	79
80	0,50	3,13	107	85	0,14	28,77	1,55	-2,81	17	80
81	0,50	3,26	42	26	0,69	8,52	0,72	-2,81	97	81
82	0,50	3,34	27	68	0,42	13,52	0,17	-2,77	98	82
83	0,49	3,43	113	105	0,07	23,67	0,51	-2,74	53	83
84	0,49	3,52	43	31	0,04	44,95	0,03	-2,73	78	84
85	0,49	3,56	35	71	0,30	26,30	0,39	-2,72	82	85
86	0,48	3,76	104	125	0,21	9,87	0,19	-2,66	2	86
87	0,48	3,82	127	5	0,29	3,89	0,42	-2,63	49	87
88	0,48	3,86	127	128	0,89	8,67	0,01	-2,62	66	88
89	0,47	3,89	49	66	0,42	8,88	0,48	-2,61	65	89
90	0,48	3,99	57	38	0,65	9,47	0,14	-2,61	64	90
91	0,48	4,01	28	56	0,84	39,49	0,03	-2,55	121	91
92	0,48	4,03	6	98	0,03	22,26	0,31	-2,54	51	92
93	0,48	4,05	128	32	0,49	9,58	0,23	-2,53	16	93
94	0,48	4,07	73	77	0,64	9,43	0,47	-2,52	29	94
95	0,49	4,13	88	76	1,15	26,64	0,08	-2,52	67	95
96	0,49	4,22	29	21	0,95	11,53	0,61	-2,50	62	96
97	0,49	4,23	48	84	0,98	17,68	0,44	-2,50	52	97
98	0,50	4,37	14	9	0,86	8,87	0,33	-2,47	119	98
99	0,50	4,59	44	28	0,60	23,86	0,39	-2,38	109	99
100	0,50	4,64	41	27	0,52	21,73	0,16	-2,38	89	100
101	0,49	4,77	93	31	0,32	2,76	0,36	-2,26	100	101
102	0,49	4,77	25	83	0,57	7,89	0,94	-2,26	101	102
103	0,49	4,91	104	34	0,20	35,16	0,21	-2,21	94	103
104	0,49	5,24	9	68	0,21	4,64	0,52	-2,21	41	104
105	0,49	5,48	92	73	0,27	3,34	0,42	-2,15	27	105
106	0,49	5,48	91	73	0,47	34,37	0,38	-2,12	48	106
107	0,49	5,41	95	97	0,41	51,82	0,25	-1,98	72	107
108	0,49	5,44	43	105	0,48	4,77	0,57	-1,91	25	108
109	0,49	5,53	105	17	1,58	8,31	0,99	-1,86	83	109
110	0,49	5,53	48	83	0,82	7,12	0,42	-1,75	84	110
111	0,48	5,71	126	99	0,43	29,65	0,83	-1,68	61	111
112	0,49	5,96	9	15	0,49	8,8	0,20	-1,67	92	112
113	0,49	5,98	51	62	0,55	5,48	0,47	-1,67	91	113
114	0,49	6,00	49	65	0,41	31,35	0,88	-1,51	73	114
115	0,49	6,00	49	64	0,80	15,76	0,64	-1,41	103	115
116	0,49	6,25	95	63	0,14	8,78	0,77	-1,39	77	116
117	0,48	6,31	83	84	0,99	3,28	0,89	-1,39	42	117
118	0,48	6,51	48	85	0,13	8,54	0,82	-1,00	26	118
119	0,48	6,52	97	90	0,78	8,74	0,87	-0,93	60	119

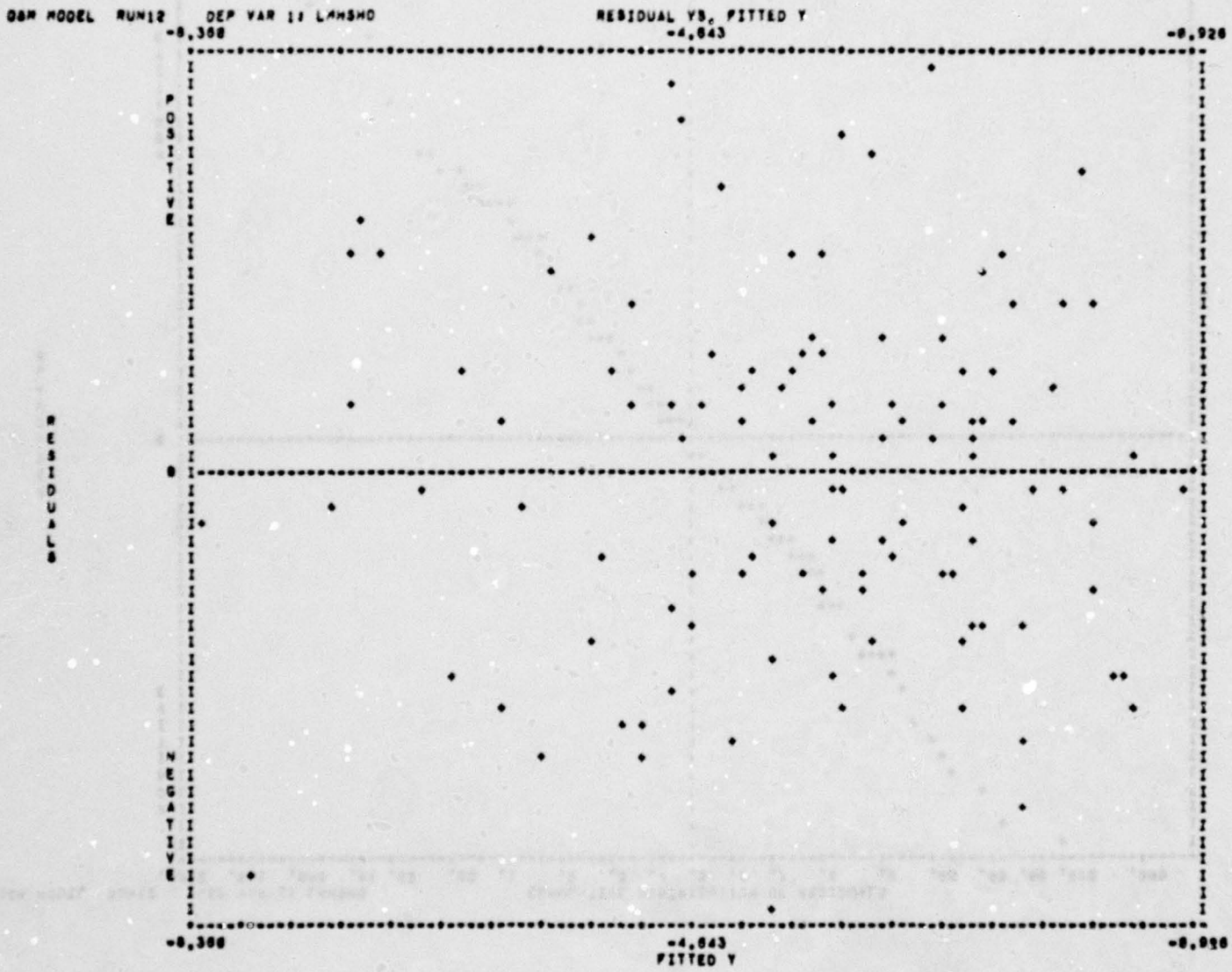
LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN12 DEP VAR IS LMHSHO

ORDERED BY COMPUTER INPUT						ORDERED BY RESIDUALS				
IDENT,	OBSV,	WSS DISTANCE	OBS, Y	FITTED Y	RESIDUAL	OBSV,	OBS, Y	FITTED Y	ORDERED RESID,	SEQ
71B3B	1	1,	-4,829	-3,988	-0,841	17	-1,574	-2,814	1,240	1
71L8B	2	5,	-3,357	-2,660	-0,697	13	-3,572	-4,741	1,170	2
71M9B	3	21,	-3,357	-3,569	0,212	14	-3,628	-4,667	1,039	3
71P4B	4	2,	-3,542	-3,616	0,074	98	-2,487	-3,483	0,996	4
71P9B	5	6,	-3,979	-4,837	0,858	44	-2,286	-3,271	0,985	5
71710	6	17,	-6,240	-6,893	0,647	64	-0,827	-1,748	0,921	6
72JGB	7	9,	-6,598	-5,758	-0,839	15	-3,572	-4,434	0,862	7
71FAB	8	5,	-4,183	-4,488	0,376	58	-6,262	-7,034	0,772	8
71F8B	10	15,	-4,549	-4,673	0,123	74	-4,648	-5,334	0,688	9
71CAB	11	5,	-5,817	-4,958	-0,859	118	-3,217	-3,902	0,685	10
71DAB	12	3,	-3,681	-3,352	-0,329	89	-1,619	-2,299	0,679	11
51EAB	13	5,	-3,572	-4,741	1,170	6	-6,240	-6,893	0,647	12
52AAB	14	6,	-3,628	-4,667	1,039	34	-3,844	-3,691	0,647	13
52AB9	15	8,	-3,572	-4,434	0,862	128	-6,521	-7,159	0,638	14
63R08	16	18,	-6,884	-5,918	-0,894	119	-1,852	-2,473	0,621	15
71AE8	17	16,	-1,574	-2,814	1,240	108	-5,934	-5,624	0,569	16
74JA8	18	9,	-2,724	-2,530	-0,193	46	-4,514	-5,032	0,518	17
74JC8	19	7,	-3,981	-4,224	0,243	100	-1,743	-2,260	0,516	18
52GA1	20	2,	-4,837	-5,843	0,206	61	-1,173	-1,678	0,505	19
71ZAB	21	5,	-5,709	-4,961	-0,748	25	-1,464	-1,966	0,503	20
73EG8	24	18,	-3,139	-3,250	0,111	99	-2,363	-2,765	0,402	21
73EP8	25	19,	-1,484	-1,908	0,503	104	-3,322	-3,714	0,391	22
73HA8	26	19,	-1,925	-1,998	-0,026	28	-2,821	-3,210	0,389	23
73HC8	27	18,	-2,613	-2,147	-0,466	9	-4,193	-4,488	0,375	24
73NA8	28	26,	-2,821	-3,210	0,389	53	-3,481	-3,825	0,365	25
73Q88	29	8,	-2,488	-2,524	0,036	58	-3,453	-3,814	0,360	26
73BC8	30	11,	-4,135	-3,817	-0,318	60	-3,381	-3,654	0,353	27
73K88	31	4,	-2,889	-3,067	0,178	57	-3,532	-3,864	0,332	28
73KE8	32	4,	-3,804	-3,315	-0,489	98	-5,985	-6,299	0,314	29
73KF8	33	3,	-4,531	-4,234	-0,296	71	-4,911	-5,221	0,310	30
73KK8	34	11,	-3,844	-3,691	0,647	109	-2,884	-2,378	0,294	31
75938	35	9,	-5,468	-5,469	0,000	84	-2,317	-2,609	0,293	32
74B08	36	5,	-3,120	-3,242	0,122	123	-3,933	-4,218	0,285	33
74BF8	37	2,	-3,573	-3,508	-0,065	99	-3,673	-3,955	0,282	34
76N18	38	36,	-6,887	-6,635	-0,252	72	-1,730	-1,983	0,253	35
78A18	39	5,	-5,158	-4,358	-0,799	19	-3,981	-4,224	0,243	36
78GA8	40	7,	-4,565	-4,797	0,232	48	-4,565	-4,797	0,232	37
74FF8	41	22,	-3,195	-2,289	-0,905	63	-2,589	-2,748	0,231	38
74FA8	42	15,	-2,105	-1,389	-0,716	117	-6,927	-7,156	0,230	39
74FH8	43	8,	-2,958	-3,179	0,221	110	-4,311	-4,539	0,228	40
74FU8	44	46,	-2,296	-3,271	0,985	43	-2,958	-3,179	0,221	41
73CG8	46	37,	-4,514	-5,032	0,518	3	-3,357	-3,569	0,212	42
74FC8	48	18,	-2,063	-2,128	-0,043	28	-4,837	-5,043	0,206	43
74FJ8	49	3,	-3,137	-2,626	-0,511	92	-2,318	-2,498	0,180	44
74FK8	50	18,	-6,292	-7,834	0,772	125	-3,522	-3,702	0,180	45
74F08	51	19,	-2,417	-2,537	0,120	31	-2,889	-3,067	0,178	46
74KA8	52	7,	-2,318	-2,498	0,180	70	-5,886	-6,054	0,168	47
74KC8	53	7,	-3,481	-3,825	0,365	88	-4,899	-4,265	0,166	48
74CA8	54	9,	-5,345	-4,030	-1,315	101	-2,101	-2,258	0,157	49
74C98	55	7,	-5,102	-4,661	-0,442	121	-2,481	-2,549	0,148	50
74CC8	56	7,	-5,432	-4,800	-0,632	18	-4,549	-4,673	0,123	51
74FA1	57	9,	-3,532	-3,864	0,332	36	-3,128	-3,242	0,122	52
74E88	58	8,	-3,453	-3,814	0,360	51	-2,417	-2,537	0,120	53
73PH8	59	4,	-3,548	-3,384	-0,282	24	-3,139	-3,250	0,111	54
73P88	60	38,	-8,936	-8,926	-0,023	95	-2,732	-2,827	0,095	55
73PD8	61	14,	-1,173	-1,678	0,505	4	-3,542	-3,618	0,076	56
73PF8	62	28,	-2,948	-2,585	-0,435	8	-3,979	-4,037	0,058	57
73PH8	63	4,	-2,589	-2,748	0,231	77	-1,345	-1,395	0,050	58
71NA8	64	4,	-2,317	-2,609	0,293	28	-2,488	-2,524	0,036	59
71QU8	65	4,	-2,718	-2,612	-0,106	35	-5,468	-5,469	0,000	60

63A38	86	3.	-2.788	-2.618	-0.098	128	-3.451	-3.453	0.002	61
65AA8	87	5.	-2.955	-2.523	-0.432	60	-0.930	-0.926	-0.003	62
63AG8	88	4.	-4.099	-4.265	0.166	28	-1.025	-0.998	-0.026	63
638F8	70	10.	-5.886	-6.054	0.168	85	-3.402	-3.566	-0.036	64
7148E	71	11.	-4.911	-5.221	0.310	48	-2.163	-2.128	-0.043	65
7140A	72	13.	-1.730	-1.983	0.253	36	-0.687	-0.635	-0.052	66
7308A	73	11.	-0.106	-1.515	0.592	37	-3.573	-3.508	-0.065	67
71ACC	74	42.	-4.648	-5.334	0.668	83	-1.925	-1.857	-0.067	68
73C80	75	49.	-6.987	-6.378	-0.618	76	-7.333	-7.258	-0.075	69
73CE4	76	41.	-7.333	-7.258	-0.075	88	-2.708	-2.618	-0.090	70
73CF4	77	8.	-1.345	-1.395	0.050	16	-6.884	-5.910	-0.094	71
730AM	78	20.	-3.812	-2.735	-0.277	65	-2.716	-2.612	-0.104	72
73E8A	79	12.	-5.571	-5.316	-0.255	91	-1.790	-1.666	-0.124	73
73E8F	80	8.	-3.301	-3.654	0.353	88	-0.523	-0.360	-0.163	74
71C40	81	8.	-5.149	-4.767	-0.381	93	-3.223	-3.077	-0.146	75
73EG8	82	12.	-3.833	-2.724	-0.310	126	-4.172	-4.021	-0.151	76
73HC8	83	11.	-1.925	-1.857	-0.067	107	-3.793	-3.621	-0.172	77
73L48	84	4.	-0.827	-1.748	0.921	113	-3.368	-3.187	-0.181	78
77EC8	85	2.	-3.682	-3.566	-0.116	18	-2.724	-2.530	-0.193	79
77EE8	86	47.	-9.091	-7.867	-1.224	127	-4.382	-4.145	-0.237	80
77D8P	88	47.	-0.503	-0.360	-0.143	79	-5.571	-5.316	-0.255	81
76A5A	89	5.	-1.619	-2.299	0.679	105	-3.384	-3.128	-0.256	82
73KA8	90	7.	-2.363	-2.765	0.402	78	-3.012	-2.735	-0.277	83
638AA	91	10.	-1.790	-1.666	-0.124	59	-3.648	-3.364	-0.282	84
63CAA	92	10.	-1.987	-1.666	-0.321	122	-4.941	-4.648	-0.293	85
658AA	93	6.	-3.223	-3.077	-0.146	33	-4.531	-4.234	-0.296	86
6198A	94	5.	-2.928	-2.210	-0.718	82	-3.033	-2.724	-0.310	87
61AA8	95	5.	-2.732	-2.827	0.095	97	-3.124	-2.809	-0.315	88
61A98	96	6.	-2.487	-3.483	0.996	38	-4.135	-3.817	-0.318	89
61AC8	97	9.	-3.124	-2.809	-0.315	92	-1.987	-1.666	-0.321	90
72AA8	98	28.	-5.985	-6.293	0.314	12	-3.881	-3.552	-0.329	91
72AC8	99	18.	-3.673	-3.955	0.282	1	-4.029	-3.688	-0.341	92
71CA8	100	12.	-1.743	-2.260	0.516	81	-5.149	-4.767	-0.381	93
72E4A	101	12.	-2.101	-2.258	0.157	87	-2.955	-2.523	-0.432	94
72PP0	103	16.	-2.883	-1.413	-0.590	62	-2.948	-2.505	-0.438	95
71JA8	104	3.	-3.322	-3.714	0.391	55	-5.102	-4.661	-0.442	96
71LA8	105	4.	-3.384	-3.128	-0.256	27	-2.613	-2.147	-0.466	97
72D48	106	12.	-4.244	-3.834	-0.709	32	-3.884	-3.315	-0.489	98
72AC8	107	2.	-3.793	-3.621	-0.172	40	-3.137	-2.626	-0.511	99
71719	108	10.	-5.034	-5.624	0.589	112	-5.888	-5.379	-0.501	100
71310	109	13.	-2.884	-2.378	0.294	114	-4.628	-4.064	-0.565	101
72FF8	110	18.	-4.311	-4.539	0.226	103	-2.893	-1.413	-0.590	102
72H82	111	24.	-5.899	-5.158	-0.741	73	-2.106	-1.515	-0.592	103
71JCE	112	13.	-5.888	-5.379	-0.521	124	-4.237	-3.625	-0.612	104
724E8	113	13.	-3.368	-3.187	-0.181	75	-0.987	-0.370	-0.618	105
72CC8	114	4.	-4.628	-4.064	-0.565	56	-5.432	-4.800	-0.632	106
71Z88	116	14.	-6.765	-6.062	-0.703	2	-3.357	-2.660	-0.697	107
71Z08	117	21.	-6.927	-7.156	0.230	116	-6.765	-6.062	-0.703	108
658AA	118	4.	-3.217	-3.902	0.685	108	-4.244	-3.534	-0.709	109
63AF8	119	7.	-2.852	-2.473	0.621	42	-2.185	-1.349	-0.716	110
63AA8	120	2.	-3.451	-3.453	0.002	111	-5.899	-5.158	-0.741	111
63121	121	7.	-2.421	-2.569	0.148	21	-5.709	-4.961	-0.748	112
63AAA	122	10.	-4.941	-4.648	-0.293	94	-2.998	-2.210	-0.788	113
55AL8	123	6.	-3.933	-4.218	0.285	39	-5.158	-4.358	-0.799	114
55AV8	124	11.	-4.237	-3.625	-0.612	7	-6.598	-5.758	-0.839	115
61AA8	125	3.	-3.522	-3.702	0.180	11	-5.817	-4.958	-0.859	116
61AE8	126	7.	-4.172	-4.021	-0.151	41	-3.195	-2.289	-3.985	117
62AA8	127	5.	-4.382	-4.145	-0.237	66	-0.891	-7.867	-1.224	118
64211	128	16.	-8.521	-7.189	0.638	84	-8.345	-4.838	-1.318	119


G&M MODEL RUN12 DEP VAR IS LMHSHO CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID


OSR MODEL RUN12 DEP VAR IS LAWSHO
RESIDUAL VS. FITTED Y
-8.368
-4.643
-8.926
POSITIVE
0
NEGATIVE
RESIDUALS
-8.368
-4.643
-8.926
FITTED Y

CP VALUES FOR THE SELECTION OF VARIABLES

G&M MODEL RUN12 DEP VAR IS LMM3.0 SEARCH NUMBER 1

SELECTION OF VARIABLES FOR BASIC EQUATION

CP =575.4, VARIABLE ADDED 13 LUP

CP =482.7, VARIABLE ADDED 6 MEM

CP =311.1, VARIABLE ADDED 4 DI

CP =187.5, VARIABLE ADDED 14 LVO

CP =105.2, VARIABLE ADDED 8 SS

CP = 78.7, VARIABLE ADDED 7 MCO

CP = 68.8, VARIABLE ADDED 3 BOMCOM

CP = 48.3, VARIABLE ADDED 1 FIGCOM

CP = 31.9, VARIABLE ADDED 11 DEM

CP = 27.5, VARIABLE ADDED 12 MRTS

CP = 22.1, VARIABLE ADDED 2 BOMNAV

CP = 19.2, VARIABLE ADDED 10 DCO

CP = 16.5, VARIABLE ADDED 5 PS

CP = 15.9, VARIABLE ADDED 9 DUP

NUMBER OF OBSERVATIONS	119
NUMBER OF VARIABLES IN FULL EQUATION	14
NUMBER OF VARIABLES IN BASIC EQUATION	12
REMAINDER OF VARIABLES TO BE SEARCHED	0

```
EQUATION  P    CP     VARIABLES IN EQUATION

          15   15.0   FULL EQUATION

          13   18.8   BASIC SET OF VARIABLES   1 FIGCOM  2 BOMNAV  3 BOMCOM  4 DI  6 SS  7 MCD  9 MEM  10 DCD  11 DEM  12 MATS

                      LUP 13   LVO 14
                      RMS =    0.29968

       1  14   16.5   BASIC SET PLUS  5 PS
                      RMS =    0.29893

       2  13   15.0   BASIC SET PLUS  5 PS  9 DUP
                      RMS =    0.29815

SWEEP NUMBER        3,  DELTA Z(K,K) =  3.D-17

ESTIMATE OF VARIANCE

NO SMALLER RMS VALUE FOUND IN SUBSET EQUATIONS

RMS OF FULL EQUATION SELECTED BY USER TO CALCULATE CP VALUES


 SEQ  EQUATION  P  ORDERED CP
   1        2  15      15.0
   2        1  14      18.8
```

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

G&R MODEL RUN13 DEP VAR IS LLSCFD MIN Y = -4.5290 00 MAX Y = 2.3420 00 RANGE Y = 6.8710 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPOS" MODEL

LLSCFD = B(0) + B(1)FIGCOM + B(2)BOMNAV + B(3)BOMCOM + B(4)CD
+ B(5)DI + B(6)EM + B(7)XT + B(8)SS + B(9)DCC + B(10)DPS
+ B(11)DPD + B(12)DUP + B(13)NRTS + B(14)LUP + B(15)LHT
+ B(16)LPD

LLSCFD = LN(LSCFLO)

LSCFLO = FIELD LOGISTICS SUPPORT COST PER OPERATING HOUR

IND.VAR(I)	NAME	COEF.B(I)	S.E. COEF.	T-VALUE	R(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL.INF.X(I)
0		-5.921240 00							
1	FIGCOM	8.984110-01	2.180-01	3.2	0.1355	0.0	1.0000 00	1.0000 00	0.10
2	BOMNAV	8.443730-01	1.680-01	5.0	0.2159	0.0	1.0000 00	1.0000 00	0.12
3	BOMCOM	7.346230-01	2.070-01	3.5	0.1545	0.0	1.0000 00	1.0000 00	0.11
4	CD	2.213460-01	4.530-02	4.9	0.2847	4.9230-03	6.6740 00	6.6690 00	0.21
5	DI	-1.155770-02	1.880-03	6.4	0.4758	0.0	1.0000 02	1.0000 02	0.17
6	EM	-1.965820-02	3.210-03	6.1	0.5887	0.0	1.0000 02	1.0000 02	0.29
7	XT	-7.383850-03	3.320-03	2.2	0.4655	0.0	1.0000 02	1.0000 02	0.11
8	SS	-1.881250-02	2.330-03	4.8	0.6682	0.0	1.0000 02	1.0000 02	0.16
9	DCC	-2.278[illegible]0-08	1.350-08	1.7	0.1231	1.6000 01	2.8230 07	2.8230 07	0.09
10	DPS	-3.189740-04	1.180-04	2.6	0.1508	3.8190 01	2.9720 03	2.9340 03	0.13
11	DPD	2.152360-07	1.380-07	1.6	0.3275	4.4180 02	4.8840 06	4.8840 06	0.13
12	DUP	8.475590-01	1.660-01	5.8	0.1728	1.7640-01	2.8160 00	1.6440 00	0.17
13	NRTS	-8.224180-03	2.580-03	3.2	0.3173	0.0	1.0000 02	1.0000 02	0.12
14	LUP	6.778590-01	5.290-02	9.8	0.7838	5.9380 00	1.3250 01	8.2170 00	0.57
15	LHT	5.226630-01	8.330-02	6.3	0.7296	0.0	5.1570 00	5.1570 00	0.39
16	LPD	1.483780-01	5.570-02	2.5	0.0492	1.0990 00	8.9880 00	8.9880 00	0.14

NO. OF OBSERVATIONS	116
NO. OF IND. VARIABLES	16
RESIDUAL DEGREES OF FREEDOM	99
F-VALUE	58.5
RESIDUAL ROOT MEAN SQUARE	0.52854878
RESIDUAL MEAN SQUARE	0.27897184
RESIDUAL SUM OF SQUARES	26.62813278
TOTAL SUM OF SQUARES	248.07896478
MULT. CORREL. COEF. SQUARED	.8969

REQUIRED X(I) PRECISION
(DIGIT RIGHT OF DECIMAL POSITIVE,
LEFT OF DECIMAL NEGATIVE)

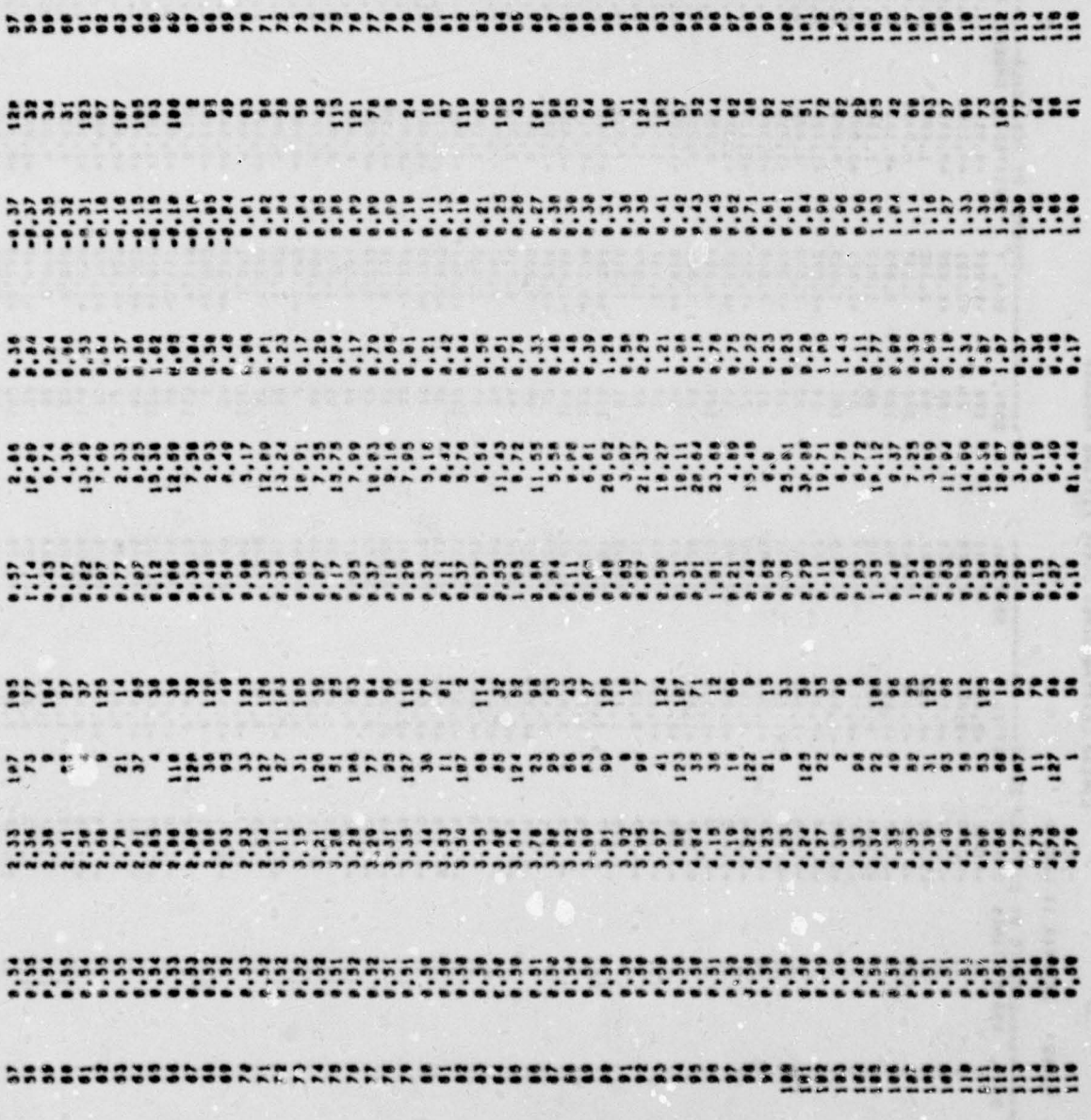
IND.VAR(I)	DIGIT
1	-1
2	-1
3	-1
4	1
5	-2
6	-2
7	-2
8	-2
9	-7
10	-4
11	-8
12	1
13	-2
14	1
15	1
16	1

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN13 DEP VAR IS LLSCFD RESIDUAL ROOT MEAN SQUARE OF FITTED EQUATION: 0.92

STANDARD DEVIATION ESTIMATED FROM RESIDUALS OF NEIGHBORING OBSERVATIONS (OBSERVATIONS 1 TO 4 APART IN FITTED Y ORDER).

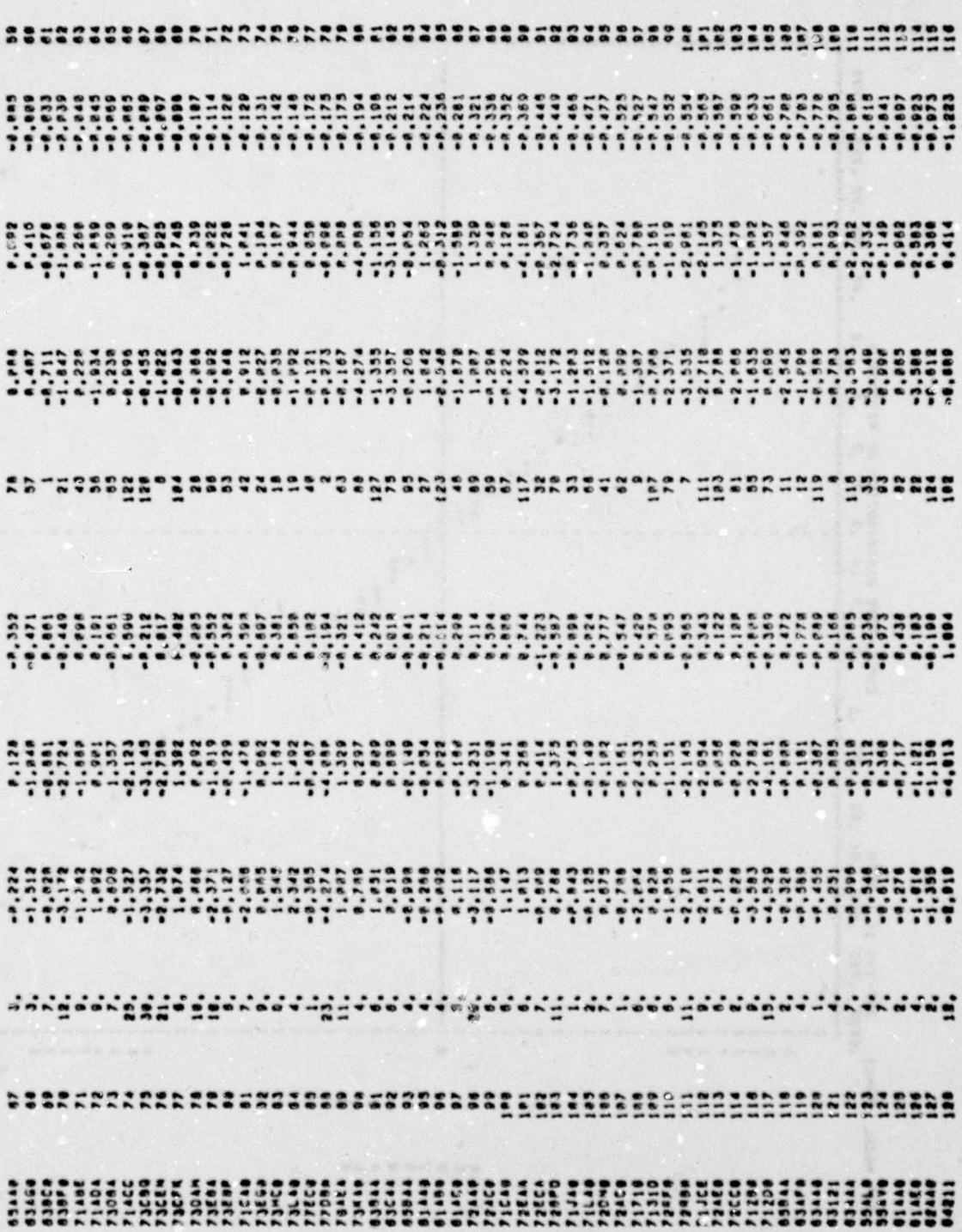
NO.	CUMULATIVE STD DEV	ORDERED BY WSSD				ORDERED BY FITTED Y				
		WSSD	OBSV.	OBSV.	DEL RESIDUALS	WSSD	DEL RESIDUALS	FITTED Y	OBSV.	SEQ.
1	0.22	0.0	92	91	0.23	0.01	1.36	-4.16	117	1
2	0.34	0.00	85	84	0.48	21.47	1.18	-4.11	23	2
3	0.46	0.01	117	23	1.35	19.82	1.29	-4.06	98	3
4	0.53	0.10	116	22	0.12	0.52	0.35	-4.01	128	4
5	0.47	0.15	113	24	0.25	11.75	0.63	-3.59	58	5
6	0.43	0.20	127	39	0.23	12.94	0.33	-3.23	98	6
7	0.41	0.25	14	13	0.38	13.12	0.36	-3.15	75	7
8	0.38	0.34	85	128	0.19	2.27	0.79	-3.11	6	8
9	0.41	0.35	126	31	0.72	6.14	0.98	-2.08	7	9
10	0.58	0.39	119	129	1.34	18.99	0.88	-2.95	112	10
11	0.48	0.48	4	85	0.09	26.23	1.14	-2.92	38	11
12	0.46	0.49	49	63	0.46	26.98	0.82	-2.78	116	12
13	0.38	0.49	128	102	2.83	33.74	0.47	-2.75	78	13
14	0.64	0.56	119	101	1.51	0.78	0.47	-2.72	78	14
15	0.68	0.63	101	108	0.86	4.34	1.33	-2.58	22	15
16	0.68	0.69	49	59	0.62	1.15	1.24	-2.43	108	16
17	0.67	0.69	109	101	0.17	13.47	0.25	-2.33	35	17
18	0.59	0.71	14	15	0.15	17.98	1.16	-2.15	111	18
19	0.58	0.72	31	107	1.17	31.95	0.84	-2.12	74	19
20	0.60	0.81	103	28	1.07	15.36	0.14	-1.89	56	20
21	0.59	0.85	19	114	0.25	4.91	0.88	-1.88	71	21
22	0.60	0.86	118	33	0.94	4.73	0.15	-1.85	11	22
23	0.58	0.88	15	13	0.16	15.27	0.51	-1.82	79	23
24	0.58	0.91	52	40	0.15	28.42	0.24	-1.81	21	24
25	0.56	0.93	125	1	0.47	31.56	0.31	-1.59	46	25
26	0.56	0.93	55	114	0.73	12.19	1.32	-1.48	81	26
27	0.57	0.96	71	79	0.65	0.71	0.15	-1.33	14	27
28	0.59	0.97	12	31	1.33	10.25	0.98	-1.28	15	28
29	0.62	0.97	117	128	1.48	0.84	0.98	-1.19	99	29
30	0.60	0.99	23	128	0.11	0.17	0.62	-1.18	13	30
31	0.60	1.04	33	4	0.66	3.35	0.29	-1.16	127	31
32	0.59	1.04	32	32	0.26	7.48	0.81	-1.15	110	32
33	0.58	1.07	79	81	0.84	3.21	0.87	-1.12	126	33
34	0.57	1.08	55	19	0.49	5.28	0.58	-1.06	39	34
35	0.59	1.15	108	35	1.24	0.55	1.10	-1.04	68	35
36	0.59	1.21	63	59	0.13	9.58	1.26	-1.01	28	36
37	0.58	1.23	12	128	0.41	1.08	0.49	-1.00	55	37
38	0.57	1.25	9	53	0.41	0.85	0.25	-0.94	19	38
39	0.56	1.25	104	1	0.06	0.84	0.20	-0.93	114	39
40	0.56	1.27	5	118	0.57	11.64	0.91	-0.92	5	40
41	0.56	1.27	67	66	0.42	7.41	0.95	-0.91	122	41
42	0.55	1.49	1	4	0.03	0.17	0.39	-0.88	69	42
43	0.55	1.48	118	104	0.57	5.02	1.00	-0.80	118	43
44	0.54	1.50	33	1	0.43	2.38	0.43	-0.78	9	44
45	0.54	1.50	104	33	0.37	1.50	0.37	-0.75	104	45
46	0.53	1.68	123	105	0.26	0.24	0.35	-0.74	33	46
47	0.54	1.84	85	12	0.81	4.68	0.56	-0.73	53	47
48	0.53	2.03	25	60	0.13	0.93	0.47	-0.72	125	48
49	0.54	2.11	32	31	1.07	1.49	0.23	-0.68	1	49
50	0.54	2.11	1	36	0.34	2.58	0.82	-0.66	4	50
51	0.54	2.11	128	6	0.95	0.96	0.83	-0.60	37	51
52	0.55	2.11	105	106	0.75	0.51	0.16	-0.54	58	52
53	0.55	2.18	104	125	0.54	2.27	0.21	-0.48	36	53
54	0.54	2.26	125	4	0.24	7.68	0.78	-0.47	85	54
55	0.54	2.27	6	7	0.78	10.20	1.01	-0.43	60	55
56	0.54	2.27	36	85	0.21	1.23	0.61	-0.39	12	56

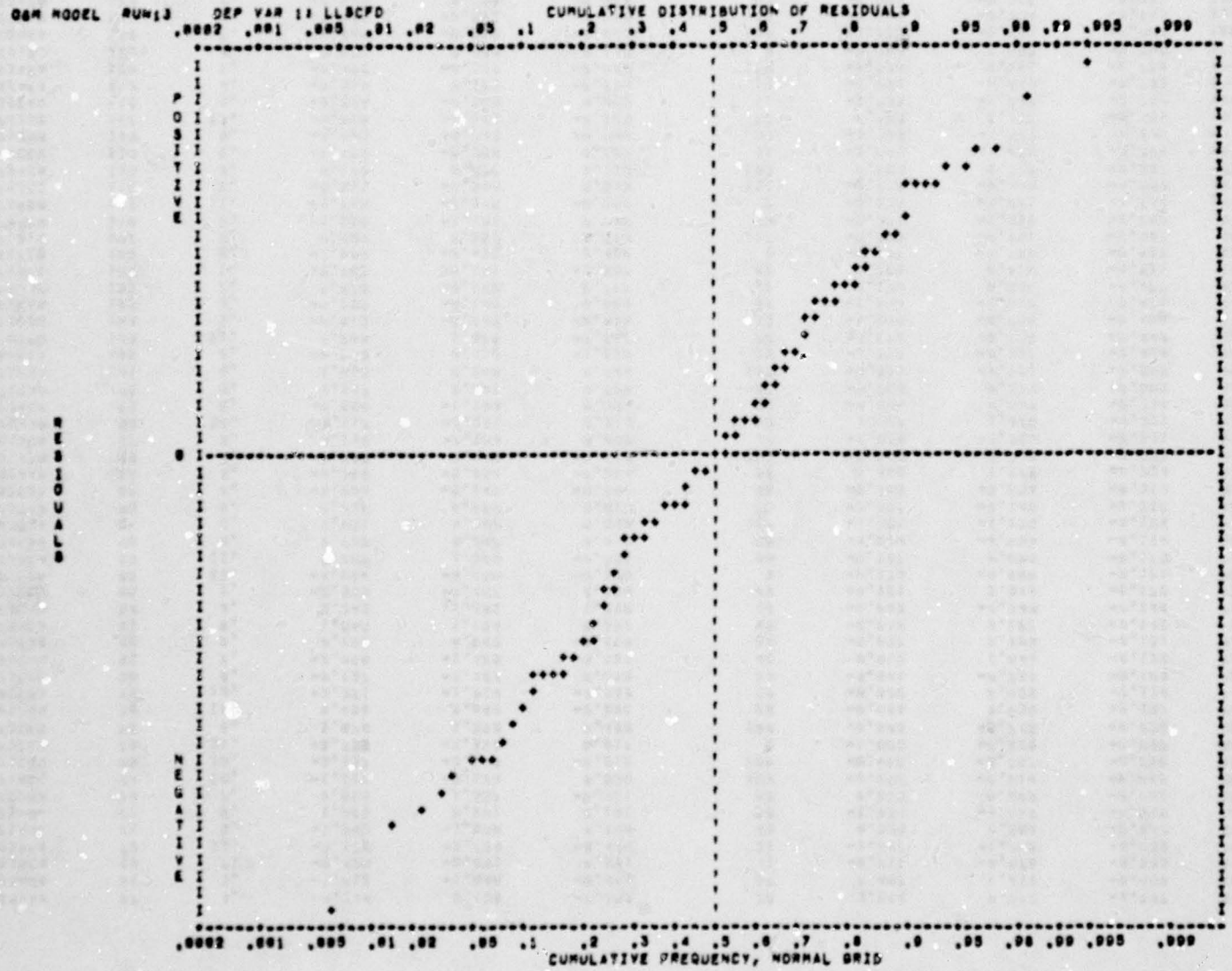


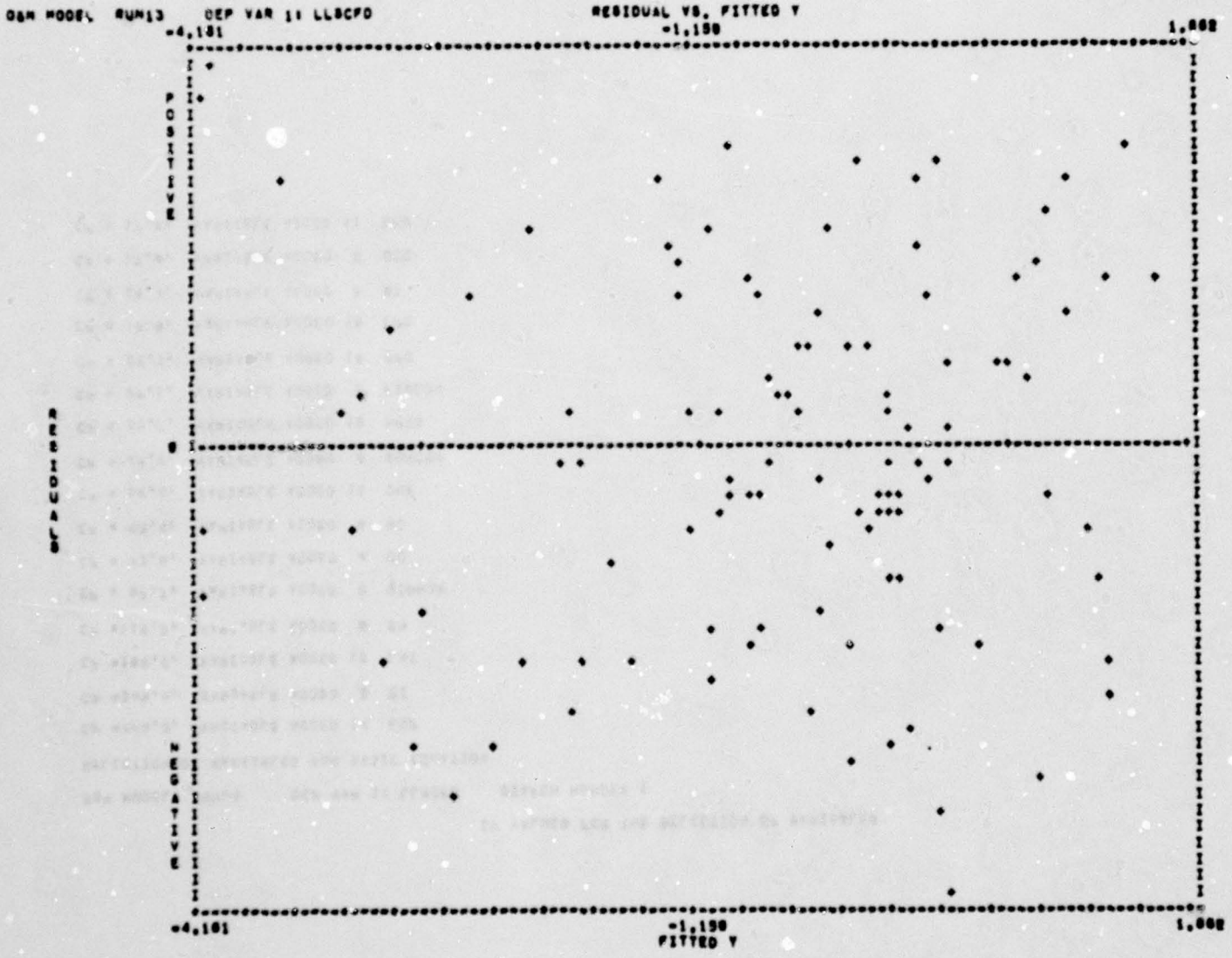
LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&N MODEL RUN13 DEP VAR 11 LLSCFD

ORDERED BY COMPUTER INPUT						ORDERED BY RESIDUALS				
IDENT,	OBSV,	NBS DISTANCE	OBS, Y	FITTED Y	RESIDUAL	OBSV,	OBS, Y	FITTED Y	ORDERED RESID,	SEQ
71B2P	1	1,	-P,711	-P,676	-P,033	128	-2,919	-4,913	1,994	1
71LBP	2	3,	-P,273	-P,898	-P,175	23	-3,121	-4,110	P,989	2
71PKA	4	1,	-P,469	-P,664	P,195	69	-P,920	-P,881	P,861	3
71PBP	5	3,	-1,P22	-P,925	-P,P97	84	2,342	1,492	P,858	4
71710	6	10,	-2,969	-3,115	P,145	108	1,147	P,341	P,806	5
724GP	7	11,	-3,535	-2,981	-P,554	106	P,675	-P,1P2	P,777	6
71G5P	8	2,	-P,783	P,P93	-P,795	60	1,912	1,138	P,774	7
71F3P	9	1,	-1,3P7	-P,788	-P,527	50	-2,921	-3,567	P,746	8
71CAP	11	3,	-2,545	-1,946	-P,788	1P1	1,913	P,268	P,744	9
71D4P	12	2,	-1,P96	-P,392	-P,7P3	14	-P,596	-1,327	P,731	10
51EAP	13	3,	-P,758	-1,185	P,427	25	1,67P	1,P25	P,645	11
52AAP	14	3,	-P,596	-1,327	P,731	20	-P,384	-1,P14	P,639	12
52A8P	15	5,	-P,697	-1,278	P,582	31	P,306	-P,321	P,627	13
74JAP	18	3,	-P,255	P,187	-P,142	74	-1,527	-2,123	P,596	14
74JCP	19	3,	-1,P92	-P,944	-P,148	15	-2,697	-1,278	P,582	15
52GA1	2P	6,	-P,384	-1,214	P,638	109	P,82P	P,258	P,578	16
71ZAP	21	4,	-1,847	-1,8P8	-P,P39	29	1,581	P,985	P,536	17
71Z8P	22	8,	-3,586	-2,583	-P,923	99	-P,686	-1,198	P,504	18
71ZCP	23	15,	-3,121	-4,110	P,989	26	2,147	1,668	P,487	19
73EGP	24	6,	-P,P27	P,1P4	-P,131	77	1,874	1,392	P,482	20
73EPP	25	11,	1,678	1,P25	P,645	51	1,318	P,842	P,476	21
73M4P	26	12,	P,147	1,668	P,487	118	-P,328	-P,8P8	P,472	22
73MCP	27	8,	1,842	1,266	-P,224	125	-P,276	-P,717	P,438	23
73NAP	28	13,	-P,P68	P,P39	-P,1P7	1P8	-2,8P4	-2,433	P,429	24
73096	29	5,	1,581	P,965	P,536	13	-P,758	-1,185	P,427	25
73K6P	31	1,	P,3P6	-P,321	P,627	98	P,799	P,297	P,412	26
73KEP	32	2,	-P,P12	-P,357	-P,446	64	P,714	P,3P2	P,412	27
73KFP	33	2,	-1,243	-P,736	-P,486	34	P,P43	-P,347	P,398	28
73KK6	34	5,	P,P43	-P,347	P,398	83	1,545	1,164	P,381	29
7593R	35	5,	-3,149	-2,334	-P,815	112	-2,611	-2,954	P,343	30
748QP	36	3,	-P,178	-P,488	P,310	38	-2,575	-2,916	P,341	31
748FP	37	5,	-P,429	-P,601	P,172	36	-P,178	-P,488	P,310	32
74B1P	38	17,	-2,575	-2,916	P,341	80	-P,127	-P,429	P,3P2	33
75A1P	39	3,	-1,P4P	-1,279	P,P3P	97	P,118	-P,18P	P,298	34
75GAP	40	9,	-P,121	P,P58	-P,172	49	P,243	-P,83P	P,282	35
74FFP	41	13,	-P,128	P,357	-P,477	44	P,781	P,446	P,256	36
74FAP	42	13,	P,912	1,P41	-P,129	91	1,851	P,829	P,242	37
74FMP	43	3,	P,22P	P,268	-P,P42	48	P,935	P,7P7	P,228	38
74FUP	44	24,	P,781	P,446	P,256	4	-P,469	-P,664	P,195	39
73CGP	46	18,	-1,878	-1,589	-P,281	72	1,P92	P,9P1	P,191	40
74FCP	48	6,	P,935	P,707	P,228	37	-P,426	-P,601	P,172	41
74FJP	49	2,	P,243	-P,P38	P,282	121	P,251	P,P85	P,166	42
74FKP	50	7,	-2,821	-3,567	P,746	58	-P,398	-P,544	P,146	43
74FQP	51	15,	1,318	P,842	P,476	6	-2,969	-3,115	P,145	44
74KAP	52	3,	P,510	P,434	P,P76	113	P,178	P,056	P,122	45
74KCP	53	4,	-P,P48	-P,728	-P,12P	98	-3,117	-3,231	P,114	46
74C8P	55	0,	-1,835	-1,P92	-P,633	126	-1,918	-1,121	P,103	47
74CCP	56	5,	-1,934	-1,889	-P,P45	85	-P,365	-P,467	P,102	48
74FA1	57	8,	P,487	P,413	-P,P29	114	-P,828	-P,928	P,1P0	49
74E8R	58	3,	-P,398	-P,544	P,146	71	-1,782	-1,88P	P,098	50
73PHP	59	2,	-P,298	P,P48	-P,338	118	-1,856	-1,151	P,P95	51
73P8P	60	17,	1,912	1,138	P,774	52	P,510	P,434	P,P76	52
73PDP	61	15,	1,867	1,862	P,P06	66	P,276	P,209	P,068	53
73PFP	62	12,	P,P99	P,624	-P,525	39	-1,P49	-1,P79	P,P30	54
73PHP	63	2,	-P,167	P,P88	-P,175	105	-P,125	-P,149	P,P24	55
71NAP	64	3,	P,714	P,3P2	P,412	78	-2,732	-2,758	P,017	56
71QUP	65	3,	P,238	P,299	-P,P69	92	P,819	P,8P9	P,P10	57
83AAP	66	2,	P,276	P,2P9	P,P68	61	1,867	1,862	P,P06	58




G&M MODEL RUN 13 DEP VAR IS LLBCFD
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID


O&M MODEL RUN13 DEP VAR IS LLSCFD
RESIDUAL VS. FITTED Y
-4.181
-1.158
1.868
POSITIVE
0
NEGATIVE
RESIDUALS
-4.181
-1.158
1.868
FITTED Y

CP VALUES FOR THE SELECTION OF VARIABLES

O&M MODEL RUN13 DEP VAR 11 LLSCPD SEARCH NUMBER 1

SELECTION OF VARIABLES FOR BASIC EQUATION

Cp =484.5, VARIABLE ADDED 14 LUP

Cp =349.4, VARIABLE ADDED 5 DI

Cp =169.6, VARIABLE ADDED 15 LNT

Cp =118.9, VARIABLE ADDED 6 EM

Cp = 97.7, VARIABLE ADDED 2 BOMNAV

Cp = 83.9, VARIABLE ADDED 4 CO

Cp = 65.4, VARIABLE ADDED 8 SS

Cp = 58.6, VARIABLE ADDED 12 DUF

Cp = 48.8, VARIABLE ADDED 3 BOMCOM

Cp = 35.7, VARIABLE ADDED 13 NMTS

Cp = 27.1, VARIABLE ADDED 1 FIGCOM

Cp = 22.1, VARIABLE ADDED 10 DPS

Cp = 19.5, VARIABLE ADDED 16 LPD

Cp = 18.4, VARIABLE ADDED 7 XT

Cp = 17.4, VARIABLE ADDED 9 DCC

Cp = 17.0, VARIABLE ADDED 11 DPO

```
NUMBER OF OBSERVATIONS                          116
NUMBER OF VARIABLES IN FULL EQUATION             16
NUMBER OF VARIABLES IN BASIC EQUATION            14
REMAINDER OF VARIABLES TO BE SEARCHED             2


EQUATION  P    CP     VARIABLES IN EQUATION

          17   17.0   FULL EQUATION

          15   17.4   BASIC SET OF VARIABLES   FISCON(1)  BONNAV(2)  BOMCOM(3)  CD(4)  DI(5)  EM(6)  XT(7)  SS(8)  DPS(10)  DUP(12)

                      NRTS(13)  LUP(14)  LNT(15)  LPD(16)
                      RMS =    0.27748

      1   16   17.4   BASIC SET PLUS       9
                                  OCC
                      RMS =    0.27481

      2   17   17.8   BASIC SET PLUS       9        11
                                  OCC       DPD
                      RMS =    0.27897

      3   16   17.8   BASIC SET PLUS      11
                                  DPD
                      RMS =    0.27595

SWEEP NUMBER          3,  DELTA X(K,K) =  1.0-17

ESTIMATE OF VARIANCE

NO SMALLER RMS VALUE FOUND IN SUBSET EQUATIONS

RMS OF FULL EQUATION SELECTED BY USER TO CALCULATE CP VALUES


 SEQ  EQUATION   P   ORDERED CP
   1        2   17      17.8
   2        1   16      17.4
   3        3   16      17.8
```

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN14 DEP VAR 1: LMMTOT MIN Y = -7.8980 00 MAX Y = -5.4590-01 RANGE Y = 6.5440 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALP03" MODEL

LMMTOT = B(0) + B(1)FIGSEN + B(2)FIGCOM + B(3)BOMNAV + B(4)BOMCOM
+ B(5)CO + B(6)SS + B(7)MOI + B(8)MEM + B(9)MPS
+ B(10)DUP + B(11)OCC + B(12)ODI + B(13)OEM + B(14)OPS
+ B(15)OUF + B(16)LUP + B(17)LVO + B(18)LNT

LMMTOT = LN(MMMTOT)

MMMTOT = TOTAL MAINTENANCE MANHOURS PER OPERATING HOUR

IND,VAR(I)	NAME	COEF,B(I)	S.E. COEF.	T-VALUE	R(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL.IMP.X(I)
0		-9.969670 00							
1	FIGSEN	-1.827680-01	1.130-01	1.6	0.3250	0.0	1.0000 00	1.0000 00	0.03
2	FIGCOM	5.947930-01	1.860-01	3.1	0.5781	0.0	1.0000 00	1.0000 00	0.07
3	BOMNAV	8.387720-01	1.350-01	4.7	0.2613	0.0	1.0000 00	1.0000 00	0.10
4	BOMCOM	7.885640-01	1.610-01	4.3	0.1616	0.0	1.0000 00	1.0000 00	0.11
5	CO	2.687540-01	3.990-02	6.5	0.3581	4.9230-03	6.6740 00	6.6690 00	0.27
6	SS	-1.581780-02	1.970-03	8.0	0.4913	0.0	1.0000 02	1.0000 02	0.24
7	MOI	-1.257150-02	1.380-03	9.2	0.4497	-2.4990 01	7.5.00 01	1.0000 02	0.19
8	MEM	-2.388750-02	2.340-03	10.2	0.5881	-1.2200 01	8.9800 01	1.0000 02	0.36
9	MPS	-3.627130-03	2.230-03	1.6	0.0009	-5.8100 00	9.4990 01	1.0000 02	0.06
10	DUP	5.627710-12	3.920-12	1.9	0.2427	2.2260 07	1.4360 11	1.4360 11	0.12
11	OCC	-3.139520-08	1.190-08	2.6	0.2736	7.2980 02	2.8560 07	2.8560 07	0.14
12	ODI	1.492220-04	6.780-05	2.1	0.2388	1.6960-01	3.8910 03	3.8910 03	0.07
13	OEM	-2.144390-04	7.550-05	2.8	0.0568	2.7840 01	3.8470 03	3.8280 03	0.10
14	OPS	-1.826830-04	1.120-04	1.6	0.2581	9.4260 01	2.8830 03	2.7880 03	0.08
15	OUF	3.881240-01	1.330-01	2.3	0.1119	2.9260-01	2.1930 00	1.9880 00	0.09
16	LUP	5.957730-01	4.490-02	13.3	0.7276	5.0380 00	1.3250 01	8.2170 00	0.75
17	LVO	2.282820-02	1.040-01	2.1	0.0984	3.4010 00	9.8120 00	9.6110 00	0.19
18	LNT	2.999870-01	1.090-01	2.8	0.0933	0.0	5.1570 00	5.1570 00	0.24

NO. OF OBSERVATIONS	119
NO. OF IND. VARIABLES	18
RESIDUAL DEGREES OF FREEDOM	100
F-VALUE	66.9
RESIDUAL ROOT MEAN SQUARE	0.42558838
RESIDUAL MEAN SQUARE	0.18105857
RESIDUAL SUM OF SQUARES	18.10585780
TOTAL SUM OF SQUARES	236.10730456
MULT. CORREL. COEF. SQUARED	.9233

REQUIRED X(I) PRECISION
(DIGIT RIGHT OF DECIMAL POSITIVE,
LEFT OF DECIMAL NEGATIVE)

IND,VAR(I)	DIGIT
1	-1
2	-1
3	-1
4	-1
5	1
6	-2
7	-2
8	-2
9	-2
10	-11
11	-7
12	-4
13	-4
14	-3
15	1
16	1
17	1
18	1

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN14 DEP VAR IS LMMYDT RESIDUAL ROOT MEAN SQUARE OF FITTED EQUATION: 0.43

STANDARD DEVIATION ESTIMATED FROM RESIDUALS OF NEIGHBORING OBSERVATIONS (OBSERVATIONS 1 TO 4 APART IN FITTED Y ORDER).

NO.	CUMULATIVE STD DEV	ORDERED BY WSSD				ORDERED BY FITTED Y				
		WSSD	OBSV.	OBSV.	DEL RESIDUALS	WSSD	DEL RESIDUALS	FITTED Y	OBSV.	SEQ.
1	0.21	0.0	92	91	0.22	0.0	0.56	-6.71	66	1
2	0.31	0.0	65	64	0.43	47.68	0.26	-6.71	86	2
3	0.39	0.0	66	66	0.96	17.98	0.98	-6.29	117	3
4	0.48	0.01	121	119	0.47	13.87	0.34	-6.22	50	4
5	0.55	0.05	129	128	0.16	4.55	0.17	-6.04	8	5
6	0.53	0.07	6	128	0.01	4.75	0.17	-5.99	98	6
7	0.26	0.26	53	58	0.01	2.58	0.01	-5.91	128	7
8	0.23	0.34	35	4	0.02	10.24	0.23	-5.68	7	8
9	0.23	0.39	13	14	0.23	59.69	0.19	-5.43	78	9
10	0.27	0.42	129	31	0.65	49.85	0.07	-5.37	38	10
11	0.29	0.45	16	35	0.57	49.88	0.18	-5.33	16	11
12	0.29	0.49	7	16	0.25	58.35	0.01	-5.25	78	12
13	0.35	0.64	73	74	1.07	7.87	1.20	-5.20	116	13
14	0.33	0.66	114	19	0.13	2.27	0.26	-5.18	35	14
15	0.35	0.69	54	19	0.01	27.75	1.12	-5.16	126	15
16	0.33	0.73	120	37	0.04	43.65	0.12	-5.15	75	16
17	0.36	0.73	2	121	0.04	43.49	0.05	-4.92	112	17
18	0.35	0.80	46	29	0.27	19.58	0.52	-4.79	74	18
19	0.34	0.86	79	71	0.09	28.56	0.74	-4.68	79	19
20	0.33	0.86	128	127	0.25	26.83	0.83	-4.58	111	20
21	0.32	0.87	65	66	0.06	27.52	0.13	-4.57	71	21
22	0.33	0.87	64	66	0.48	12.87	0.61	-4.58	58	22
23	0.32	0.89	119	101	0.27	4.47	1.53	-4.46	11	23
24	0.33	0.98	94	114	0.48	7.87	0.49	-4.39	28	24
25	0.34	0.93	31	37	0.61	3.12	0.38	-4.22	39	25
26	0.35	0.95	117	128	0.57	10.24	0.95	-4.18	61	26
27	0.35	0.98	10	58	0.41	56.89	0.58	-4.11	118	27
28	0.36	0.99	117	6	0.56	55.79	0.89	-3.99	46	28
29	0.38	1.26	43	32	1.89	28.81	0.88	-3.99	13	29
30	0.37	1.44	107	37	0.29	25.44	0.18	-3.98	10	30
31	0.38	1.46	114	33	0.53	4.58	0.15	-3.95	68	31
32	0.39	1.52	31	107	0.91	3.33	0.55	-3.89	9	32
33	0.39	1.53	32	12	0.07	1.92	1.08	-3.87	14	33
34	0.37	1.78	101	109	0.21	5.43	0.02	-3.85	21	34
35	0.37	1.79	19	53	0.48	18.12	0.25	-3.83	55	35
36	0.37	1.98	127	33	0.08	3.58	0.34	-3.79	127	36
37	0.36	1.92	1	85	0.30	6.54	0.26	-3.73	128	37
38	0.38	1.92	14	21	1.84	17.54	0.48	-3.73	33	38
39	0.36	1.93	125	1	0.35	18.37	0.04	-3.61	15	39
40	0.38	1.97	66	67	0.41	15.39	1.08	-3.59	99	40
41	0.38	2.01	52	16	0.37	18.53	0.69	-3.58	54	41
42	0.39	2.05	11	39	0.65	19.36	0.22	-3.58	5	42
43	0.38	2.09	58	123	0.18	0.66	0.13	-3.52	114	43
44	0.38	2.13	104	118	0.15	12.11	0.50	-3.50	19	44
45	0.37	2.18	1	6	0.08	12.59	0.11	-3.48	104	45
46	0.38	2.18	15	114	0.57	17.97	0.20	-3.44	53	46
47	0.39	2.20	15	54	1.05	16.63	0.26	-3.43	118	47
48	0.39	2.27	35	108	0.28	17.27	0.78	-3.41	58	48
49	0.40	2.34	55	15	0.79	25.13	0.52	-3.38	122	49
50	0.41	2.35	12	63	1.24	6.41	0.11	-3.38	123	50
51	0.42	2.38	128	7	0.81	12.61	0.57	-3.29	125	51
52	0.43	2.43	0	7	0.88	13.16	0.21	-3.24	40	52
53	0.43	2.56	64	67	0.89	1.92	0.38	-3.22	1	53
54	0.43	2.58	107	32	0.24	15.95	0.18	-3.21	85	54
55	0.43	2.61	124	24	0.67	18.53	0.18	-3.17	30	55
56	0.44	2.61	16	108	0.83	4.72	0.38	-3.12	4	56

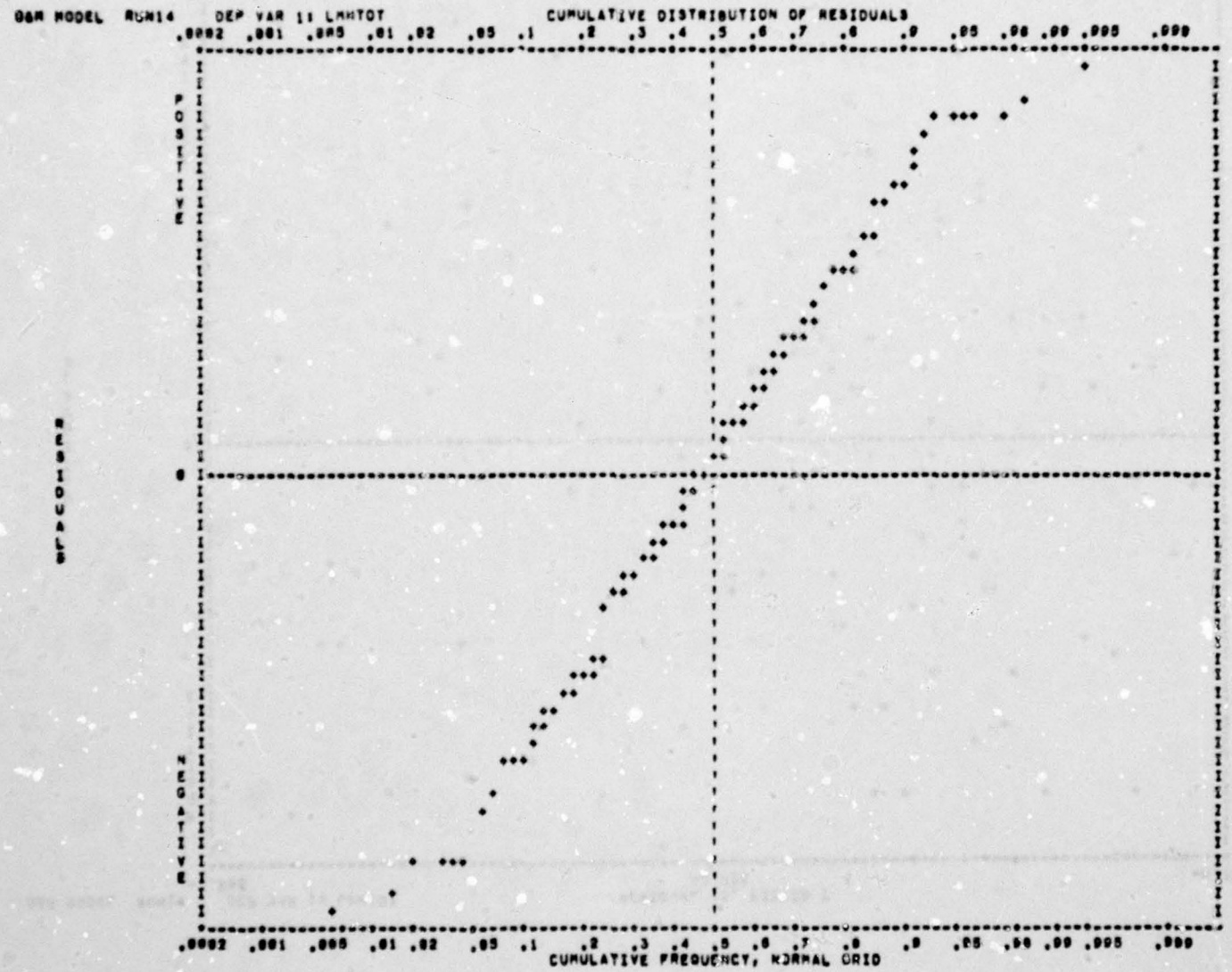
57	0.44	2.66	41	91	0.59	28.12	0.34	-3.07	59	57
58	0.44	2.71	72	73	0.44	35.76	0.19	-3.01	3	58
59	0.45	2.87	14	55	1.85	14.89	0.19	-3.00	88	59
60	0.45	2.99	0	21	0.53	19.88	0.02	-2.99	36	60
61	0.46	3.01	13	9	0.76	11.98	0.41	-2.99	34	61
62	0.45	3.03	108	79	0.67	4.89	0.58	-2.98	128	62
63	0.46	3.12	39	81	0.36	3.98	0.15	-2.92	43	63
64	0.46	3.17	103	42	0.38	1.52	0.91	-2.91	31	64
65	0.46	3.21	117	98	0.39	1.44	0.29	-2.90	107	65
66	0.46	3.23	66	21	0.68	4.16	0.54	-2.88	37	66
67	0.46	3.25	43	37	0.47	9.85	0.09	-2.86	32	67
68	0.45	3.28	33	5	0.11	6.52	0.53	-2.84	106	68
69	0.46	3.33	9	14	0.55	4.88	0.09	-2.84	57	69
70	0.46	3.35	61	103	0.89	5.31	0.45	-2.83	105	70
71	0.45	3.37	58	48	0.84	2.35	1.24	-2.78	12	71
72	0.46	3.42	125	85	0.85	17.18	0.87	-2.76	63	72
73	0.46	3.46	128	16	0.56	9.43	0.22	-2.76	93	73
74	0.46	3.50	127	126	0.34	24.78	0.38	-2.74	97	74
75	0.46	3.55	27	25	0.59	19.91	0.87	-2.71	134	75
76	0.46	3.56	43	107	0.76	46.53	0.15	-2.69	96	76
77	0.46	3.59	53	123	0.17	57.22	0.35	-2.61	44	77
78	0.45	3.69	17	82	0.73	12.48	0.73	-2.53	24	78
79	0.46	3.81	29	27	0.12	25.22	0.61	-2.51	49	79
80	0.46	3.84	105	83	0.79	34.96	0.13	-2.49	28	80
81	0.46	3.90	43	31	0.19	18.82	0.83	-2.49	95	81
82	0.45	3.93	1	59	0.23	9.8	0.43	-2.48	65	82
83	0.45	3.94	38	76	0.11	0.87	0.48	-2.47	84	83
84	0.43	3.96	11	81	0.29	18.45	0.11	-2.39	66	84
85	0.45	4.06	13	88	0.62	5.25	0.47	-2.38	113	85
86	0.45	4.13	42	28	0.85	29.31	0.85	-2.37	41	86
87	0.46	4.14	31	32	1.15	13.32	0.31	-2.32	87	87
88	0.46	4.19	37	32	0.54	16.55	0.88	-2.23	2	88
89	0.46	4.22	44	28	0.47	21.23	0.96	-2.22	52	89
90	0.46	4.29	27	83	0.58	58.38	0.18	-2.22	51	90
91	0.46	4.38	48	27	0.15	18.28	0.33	-2.22	121	91
92	0.46	4.37	89	95	0.48	17.87	0.79	-2.21	18	92
93	0.46	4.38	85	59	0.33	18.27	0.35	-2.17	119	93
94	0.46	4.44	108	105	0.43	35.54	0.71	-2.15	98	94
95	0.47	4.47	11	28	1.53	83.91	0.04	-2.11	82	95
96	0.46	4.50	88	9	0.15	14.83	0.78	-2.10	70	96
97	0.46	4.55	8	98	0.17	1.78	0.81	-2.08	101	97
98	0.46	4.72	4	59	0.38	12.87	0.99	-2.05	109	98
99	0.46	4.75	98	128	0.17	35.82	1.17	-1.98	94	99
100	0.46	4.80	120	43	0.58	7.74	0.52	-1.98	17	100
101	0.45	4.88	57	105	0.89	48.78	0.42	-1.96	38	101
102	0.45	4.97	71	39	0.29	38.98	0.68	-1.95	100	102
103	0.45	5.03	73	77	0.77	11.78	0.96	-1.91	29	103
104	0.45	5.09	32	105	0.53	6.38	0.08	-1.78	82	104
105	0.45	5.14	88	14	0.39	3.55	0.79	-1.77	27	105
106	0.45	5.14	81	89	0.55	53.80	0.91	-1.74	25	106
107	0.45	5.25	113	41	0.47	8.8	0.22	-1.55	92	107
108	0.45	5.31	105	12	0.45	42.51	0.48	-1.53	91	108
109	0.45	5.43	21	55	0.82	48.43	0.49	-1.52	83	109
110	0.45	5.58	84	89	0.83	47.33	0.52	-1.44	72	110
111	0.43	5.66	63	124	1.84	10.86	0.27	-1.32	61	111
112	0.46	5.72	89	42	0.62	12.47	1.87	-1.23	64	112
113	0.46	5.76	84	77	0.46	48.43	0.16	-1.20	103	113
114	0.46	5.83	5	104	0.43	19.85	0.41	-1.19	73	114
115	0.46	5.95	92	72	0.12	7.57	0.37	-1.09	89	115
116	0.45	5.95	91	72	0.89	13.87	0.99	-1.01	77	116
117	0.46	6.00	82	25	0.84	4.13	0.88	-1.01	42	117
118	0.45	6.02	126	99	0.16	8.78	0.01	-0.88	26	118
119	0.46	6.18	83	103	0.77	47.68	0.36	-0.78	88	119

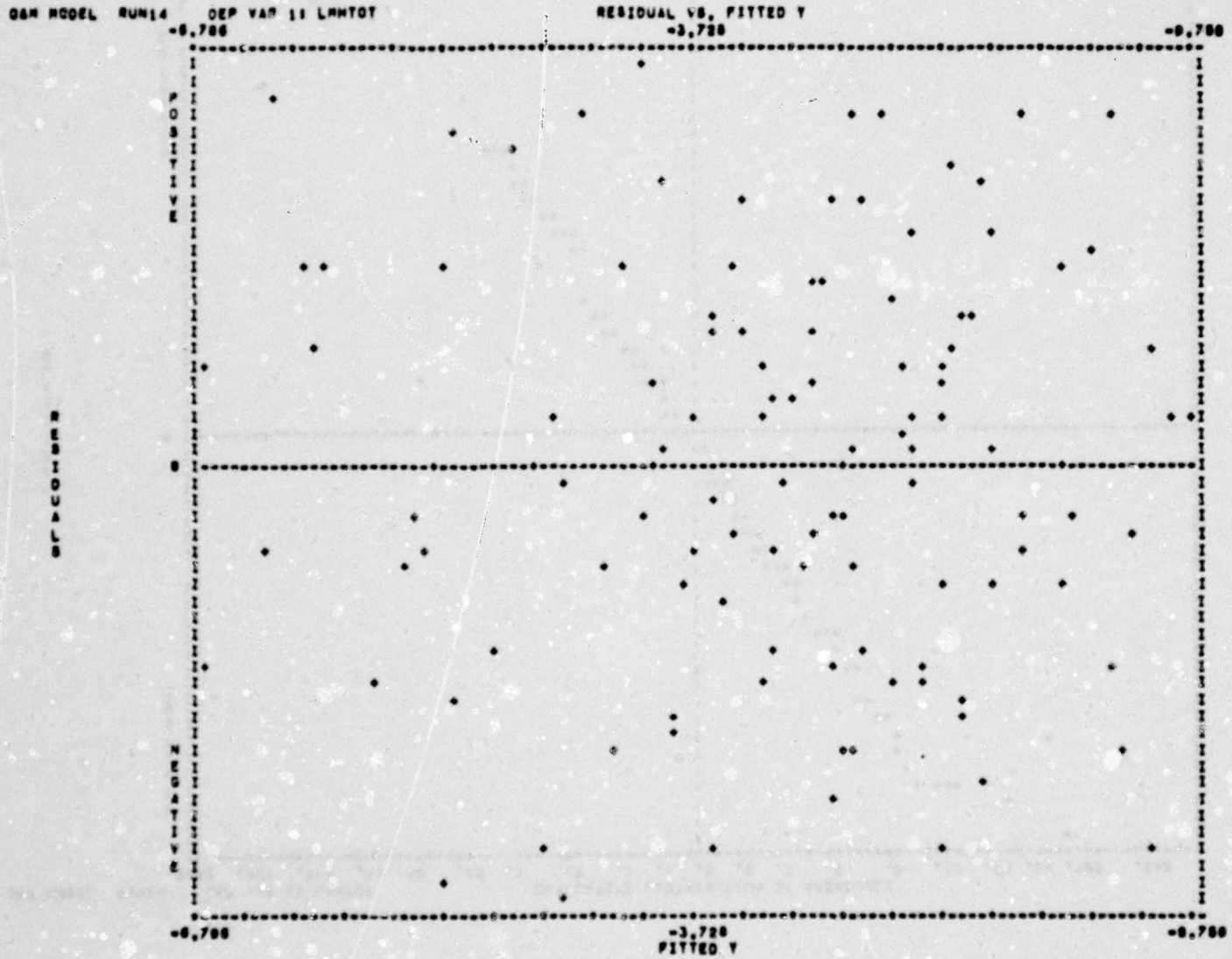
LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN14 DEP VAR IS LMHTOT

ORDERED BY COMPUTER INPUT						ORDERED BY RESIDUALS				
IDENT.	OBSV.	MSS DISTANCE	OBS. Y	FITTED Y	RESIDUAL	OBSV.	OBS. Y	FITTED Y	ORDERED RESID.	SEQ
71A2A	1	1.	-3.385	-3.221	-0.163	13	-3.282	-3.989	0.707	1
71L8A	2	6.	-2.971	-2.231	-0.740	58	-5.499	-6.217	0.718	2
71M8A	3	22.	-2.855	-3.007	0.152	84	-0.546	-1.230	0.684	3
71PKA	4	2.	-3.009	-3.124	0.115	28	-3.718	-4.388	0.670	4
71P8A	5	7.	-3.637	-3.578	-0.059	63	-2.989	-2.764	0.675	5
71718	6	19.	-5.661	-5.242	0.382	25	-1.978	-1.743	0.673	6
724GA	7	12.	-6.023	-5.601	-0.422	44	-1.947	-2.605	0.658	7
71FAA	9	4.	-3.875	-3.886	0.012	128	-4.585	-5.168	0.656	8
71F8A	10	13.	-3.992	-3.978	-0.016	74	-4.187	-4.792	0.605	9
71CAA	11	4.	-5.328	-4.463	-0.857	119	-1.681	-2.178	0.569	10
71DAA	12	3.	-3.344	-2.779	-0.565	14	-3.314	-3.872	0.557	11
51EAA	13	5.	-3.232	-3.959	0.787	17	-1.425	-1.981	0.556	12
52AAA	14	6.	-3.314	-3.872	0.557	118	-2.911	-3.428	0.518	13
52A8A	15	9.	-3.322	-3.615	0.293	31	-2.399	-2.910	0.512	14
638DA	16	18.	-5.497	-5.326	-0.171	96	-2.179	-2.686	0.507	15
71AEA	17	28.	-1.425	-1.981	0.556	64	-1.943	-2.401	0.458	16
74JAA	18	8.	-2.432	-2.206	-0.226	108	-1.498	-1.951	0.453	17
74JCA	19	8.	-3.649	-3.504	-0.145	61	-0.918	-1.322	0.413	18
52GA1	20	4.	-3.718	-4.388	0.670	35	-4.783	-5.178	0.395	19
71ZA8	21	5.	-4.388	-3.847	-0.521	119	-3.722	-4.114	0.392	20
73EGA	24	12.	-2.216	-2.529	0.313	126	-5.520	-5.907	0.387	21
73EPA	25	23.	-1.978	-1.743	0.673	83	-1.132	-1.515	0.383	22
73HAA	26	24.	-0.793	-0.877	0.084	6	-5.661	-6.042	0.382	23
73HCA	27	14.	-1.879	-1.766	-0.113	104	-3.897	-3.463	0.367	24
73HA5	28	25.	-2.302	-2.492	0.190	43	-2.553	-2.915	0.362	25
73GBA	29	11.	-2.137	-1.908	-0.229	88	-2.653	-3.001	0.347	26
73GCA	30	12.	-3.217	-3.174	-0.043	24	-2.216	-2.529	0.313	27
73HBA	31	2.	-2.399	-2.910	0.512	101	-1.787	-2.084	0.297	28
73KEA	32	4.	-3.494	-2.856	-0.639	15	-3.322	-3.615	0.293	29
73KFA	33	3.	-3.900	-3.733	-0.167	109	-1.765	-2.053	0.289	30
73KKA	34	12.	-2.720	-2.987	0.267	34	-2.720	-2.987	0.267	31
75R3A	35	8.	-4.783	-5.178	0.395	58	-3.145	-3.407	0.261	32
74BDA	36	5.	-2.739	-2.990	0.250	53	-3.184	-3.437	0.253	33
74BFA	37	3.	-3.001	-2.898	-0.103	36	-2.739	-2.990	0.250	34
74B1A	38	37.	-5.473	-5.372	-0.101	99	-3.338	-3.587	0.250	35
76A1A	39	6.	-4.426	-4.218	-0.207	77	-0.785	-1.011	0.226	36
75GAA	40	9.	-3.518	-3.243	-0.275	98	-1.940	-2.155	0.215	37
74FFA	41	26.	-2.753	-2.375	-0.385	98	-5.777	-5.990	0.213	38
74FAA	42	16.	-1.775	-1.810	0.035	51	-2.019	-2.221	0.201	39
74FHA	43	5.	-2.553	-2.915	0.362	125	-3.088	-3.288	0.191	40
74FUA	44	58.	-1.947	-2.605	0.658	28	-2.302	-2.492	0.190	41
73CGA	45	39.	-4.397	-3.991	-0.107	86	-6.526	-6.726	0.188	42
74FCA	46	12.	-1.925	-1.962	0.037	68	-3.792	-3.954	0.163	43
74FJA	49	3.	-2.928	-2.513	-0.416	3	-2.853	-3.007	0.152	44
74FKA	50	9.	-6.499	-6.217	0.718	52	-2.881	-2.225	0.143	45
74FGA	51	26.	-2.019	-2.221	0.201	85	-3.071	-3.210	0.139	46
74KAA	52	7.	-2.881	-2.225	0.143	4	-3.009	-3.124	0.115	47
74KCA	53	7.	-3.184	-3.437	0.253	121	-2.116	-2.219	0.103	48
74CAA	54	5.	-4.335	-3.583	-0.752	126	-3.640	-3.733	0.093	49
74C8A	55	7.	-4.330	-3.834	-0.496	68	-0.657	-0.750	0.093	50
74CCA	56	8.	-4.550	-4.502	-0.047	113	-2.293	-2.381	0.088	51
74FA1	57	9.	-2.559	-2.848	0.289	26	-0.793	-0.877	0.084	52
74E8A	58	7.	-3.145	-3.407	0.261	71	-4.484	-4.569	0.081	53
73FHA	59	4.	-3.257	-3.068	-0.190	123	-3.217	-3.296	0.079	54
73F8A	60	37.	-0.657	-0.750	0.093	95	-2.420	-2.485	0.065	55
73F09	61	16.	-0.918	-1.322	0.413	48	-1.925	-1.962	0.037	56
73FFA	62	24.	-2.693	-2.196	-0.497	65	-2.388	-2.421	0.033	57
73FHA	63	5.	-2.889	-2.764	0.809	97	-2.717	-2.741	0.023	58
71A49	64	4.	-1.943	-2.401	0.458	9	-3.875	-3.886	0.012	59

71QU0	65	4.	-2,368	-2,481	0,033	76	-5,245	-5,253	0,007	60
63AA0	66	3.	-2,416	-2,391	-0,025	79	-4,667	-4,676	-0,011	61
65AA0	67	4.	-2,752	-2,321	-0,431	10	-3,992	-3,976	-0,016	62
63AG0	68	4.	-3,792	-3,954	0,163	91	-1,565	-1,548	-0,017	63
63BCA	7A	15.	-5,631	-5,434	-0,197	57	-2,859	-2,840	-0,019	64
71ABE	71	15.	-4,488	-4,569	0,081	66	-2,416	-2,391	-0,025	65
71ADA	72	17.	-1,556	-1,445	-0,111	30	-3,217	-3,174	-0,043	66
73DBA	73	11.	-1,737	-1,199	-0,547	56	-4,559	-4,502	-0,047	67
71ACC	74	93.	-4,187	-4,792	0,605	5	-3,637	-3,578	-0,059	68
73CBQ	75	95.	-5,613	-5,150	-0,463	38	-5,473	-5,372	-0,101	69
73CEN	76	42.	-5,245	-5,253	0,007	37	-3,881	-2,898	-0,103	70
73CFK	77	7.	-2,785	-1,911	0,226	46	-4,897	-3,991	-0,107	71
73DAM	78	24.	-2,564	-2,102	-0,462	72	-1,556	-1,445	-0,111	72
73E9A	79	15.	-4,587	-4,676	0,011	27	-1,879	-1,766	-0,113	73
73E9F	98	16.	-2,853	-3,201	0,347	105	-2,948	-2,834	-0,113	74
71CA0	81	10.	-4,754	-4,183	-0,571	89	-1,231	-1,090	-0,141	75
73EG0	82	15.	-1,949	-1,779	-0,170	128	-3,116	-2,975	-0,142	76
73MC0	83	15.	-1,132	-1,515	0,383	19	-3,649	-3,504	-0,145	77
73L40	84	5.	-0,546	-1,230	0,684	1	-3,385	-3,221	-0,163	78
77EC0	85	2.	-3,871	-3,219	0,139	33	-3,900	-3,733	-0,167	79
77EE0	86	51.	-7,090	-6,706	-0,383	82	-1,949	-1,779	-0,170	80
77090	88	51.	-6,526	-6,706	0,180	16	-5,497	-5,326	-0,171	81
76AEA	89	8.	-1,231	-1,090	-0,141	117	-6,471	-6,291	-0,180	82
73K40	9A	8.	-1,940	-2,155	0,215	59	-3,257	-3,058	-0,198	83
63B6A	91	11.	-1,565	-1,548	-0,017	93	-2,952	-2,758	-0,194	84
63CAA	92	11.	-1,782	-1,548	-0,234	78	-5,631	-5,434	-0,197	85
659AA	93	7.	-2,952	-2,758	-0,194	39	-4,426	-4,218	-0,207	86
6189A	94	5.	-2,596	-1,984	-0,613	18	-2,432	-2,206	-0,226	87
61440	95	6.	-2,429	-2,485	0,055	29	-2,137	-1,908	-0,229	88
6148F	96	6.	-2,199	-2,086	0,587	92	-1,782	-1,548	-0,234	89
61AC0	97	8.	-2,717	-2,741	0,023	127	-4,039	-3,794	-0,245	90
72AA0	98	30.	-5,777	-5,990	0,213	114	-3,801	-3,525	-0,276	91
72ACA	99	7.	-3,338	-3,587	0,250	112	-5,265	-4,918	-0,347	92
71CA0	100	14.	-1,498	-1,951	0,453	124	-3,074	-2,712	-0,362	93
72EAA	101	11.	-1,787	-2,084	0,297	49	-3,618	-3,243	-0,375	94
72BPD	103	21.	-1,579	-1,197	-0,382	103	-1,579	-1,197	-0,382	95
71JA0	104	3.	-3,297	-3,463	0,167	86	-7,090	-6,706	-0,383	96
71LA0	105	5.	-2,948	-2,834	-0,113	41	-2,760	-2,375	-0,385	97
72DN0	106	13.	-3,392	-2,844	-0,548	107	-3,300	-2,904	-0,396	98
72AC0	107	2.	-3,388	-2,984	-0,396	49	-2,929	-2,513	-0,416	99
71710	108	13.	-4,585	-5,160	0,556	7	-6,023	-5,601	-0,422	100
71310	109	15.	-1,765	-2,053	0,289	87	-2,752	-2,321	-0,431	101
72AFA	110	13.	-3,722	-4,114	0,392	122	-3,744	-3,304	-0,440	102
72AB0	111	27.	-5,325	-4,575	-0,749	78	-2,564	-2,102	-0,462	103
71JCE	112	12.	-5,265	-4,918	-0,347	75	-5,613	-5,150	-0,463	104
72AE0	113	14.	-2,293	-2,381	0,088	55	-4,332	-3,834	-0,498	105
72CC0	114	4.	-3,881	-3,525	-0,276	62	-2,603	-2,106	-0,497	106
71ZB0	116	16.	-6,092	-5,287	-0,802	21	-4,368	-3,847	-0,521	107
71ZD0	117	25.	-6,471	-6,291	-0,180	73	-1,737	-1,190	-0,547	108
659AA	118	4.	-2,911	-3,428	0,518	105	-3,392	-2,844	-0,548	109
63AF0	119	8.	-1,883	-2,170	0,569	12	-3,344	-2,779	-0,565	110
63AA0	120	2.	-3,118	-2,975	-0,142	81	-4,754	-4,183	-0,571	111
63121	121	9.	-2,118	-2,219	0,103	84	-2,596	-1,984	-0,613	112
63AAA	122	14.	-3,744	-3,304	-0,440	32	-3,494	-2,856	-0,639	113
55AL0	123	6.	-3,217	-3,296	0,079	4	-2,971	-2,231	-0,740	114
55AY0	124	13.	-3,074	-2,712	-0,362	111	-5,325	-4,576	-0,749	115
61AA0	125	3.	-3,988	-3,288	0,191	54	-4,335	-3,583	-0,752	116
61AE0	126	6.	-3,646	-3,733	0,693	42	-1,775	-1,010	-0,765	117
62AA0	127	8.	-4,039	-3,794	-0,246	118	-6,882	-5,288	-0,882	118
64211	128	10.	-5,528	-5,007	0,387	11	-5,328	-4,463	-0,857	119


G&R MODEL RUN14 DEP VAR 11 LHHTOT
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
RESIDUALS
CUMULATIVE FREQUENCY, NORMAL GRID


O&M MODEL RUN14 DEP VAR 11 LMHTOT
RESIDUAL VS. FITTED Y
-8.786
-3.728
-8.786
POSITIVE
0
NEGATIVE
RESIDUALS
-8.786
-3.728
-8.786
FITTED Y

CP VALUES FOR THE SELECTION OF VARIABLES

O&M MODEL RUN14 DEP VAR 11 LMNTOT SEARCH NUMBER 1

SELECTION OF VARIABLES FOR BASIC EQUATION

CP =864.5, VARIABLE ADDED 15 LUP

CP =592.7, VARIABLE ADDED 8 MEM

CP =427.7, VARIABLE ADDED 7 MDI

CP =211.4, VARIABLE ADDED 6 SS

CP =189.1, VARIABLE ADDED 5 CD

CP =178.1, VARIABLE ADDED 3 BOMNAV

CP =163.7, VARIABLE ADDED 4 BOMCOM

CP =150.3, VARIABLE ADDED 2 FIGCOM

CP =145.1, VARIABLE ADDED 13 DEM

CP = 43.5, VARIABLE ADDED 16 LMT

CP = 32.7, VARIABLE ADDED 11 OCC

CP = 30.4, VARIABLE ADDED 15 DUP

CP = 24.8, VARIABLE ADDED 17 LVO

CP = 23.7, VARIABLE ADDED 12 DDI

CP = 21.1, VARIABLE ADDED 10 DUP

CP = 21.8, VARIABLE ADDED 9 MPS

CP = 19.6, VARIABLE ADDED 14 OPS

CP = 19.8, VARIABLE ADDED 1 FIGSEN

NUMBER OF OBSERVATIONS	116
NUMBER OF VARIABLES IN FULL EQUATION	18
NUMBER OF VARIABLES IN BASIC EQUATION	16
REMAINDER OF VARIABLES TO BE SEARCHED	2

```
EQUATION  P   CP    VARIABLES IN EQUATION

          19  19,0  FULL EQUATION

          17  19,0  BASIC SET OF VARIABLES      FIGCOM 2   COMNAV 3   BOXCOM 4   CO 5   SS 6   MDI 7   MEM 8   MPS 9   DUP 10   DCC 11
                    DDI 12   DEM 13   DUP 15    LUP 16   LVO 17   LWT 18
                    RMS =    0,18566

      1   18  19,6  BASIC SET PLUS      I
                                        FIGBEN
                    RMS =    0,18398

      2   18  19,6  BASIC SET PLUS      I
                                        FIGBEN   OPS 14
                    RMS =    0,18185

      3   18  19,6  BASIC SET PLUS      OPS 14
                    RMS =    0,18382

SWEEP NUMBER          3,  DELTA I(K,K) =  0,

ESTIMATE OF VARIANCE

NO SMALLER RMS VALUE FOUND IN SUBSET EQUATIONS

RMS OF FULL EQUATION SELECTED BY USER TO CALCULATE CP VALUES


 SEQ  EQUATION  P   ORDERED CP
   1        2  19      19,0
   2        3  18      19,6
   3        1  18      19,6
```

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN15 DEP VAR IS LMMUNS MIN Y = -7.4770 00 MAX Y = -1.6320 00 RANGE Y = 5.8450 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPCS" MODEL
LMMUNS = B(0) + B(1)FIGSEN + B(2)FIGCOM + B(3)BOMNAV + B(4)BOMCOM
+ B(5)OI + B(6)SS + B(7)MCC + B(8)MEM + B(9)MPD
+ B(10)OCC + B(11)OCD + B(12)OEM + B(13)OPD + B(14)OUP
+ B(15)LUP + B(16)LWT + B(17)LPC
LMMUNS = LN(MMMUNS)
MMMUNS = UNSCHEDULED MAINTENANCE MANHOURS PER OPERATING HOUR

IND.VAR(I)	NAME	COEF.B(I)	S.E. COEF.	T-VALUE	R(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL.INF.X(I)
0		-9.985140 00							
1	FIGSEN	-2.757310-01	1.120-01	2.5	0.2459	0.0	1.0000 00	1.0000 00	0.05
2	FIGCOM	3.417160-01	1.990-01	1.7	0.1393	0.0	1.0000 00	1.0000 00	0.06
3	BOMNAV	9.223270-01	1.480-01	6.2	0.2770	0.0	1.0000 00	1.0000 00	0.16
4	BOMCOM	4.788190-01	1.640-01	2.9	0.1232	0.0	1.0000 00	1.0000 00	0.08
5	OI	-7.583970-03	1.480-03	5.1	0.4768	0.0	1.0000 02	1.0000 02	0.13
6	SS	-1.264850-02	2.490-03	5.1	0.7284	0.0	1.0000 02	1.0000 02	0.19
7	MCC	1.783540-04	4.120-05	4.1	0.5292	-1.1660 03	7.1220 03	8.2880 03	0.24
8	MEM	-1.791490-02	2.520-03	7.1	0.6959	-1.0220 01	8.9840 01	1.0060 02	0.31
9	MPD	-5.483250-04	1.760-04	3.1	0.7345	-3.3280 02	9.6650 03	9.9970 03	0.28
10	OCC	-4.865410-08	1.280-08	3.2	0.3278	7.2980 02	2.8560 07	2.8560 07	0.28
11	OCD	8.179330-02	2.270-02	3.8	0.2948	1.7840-04	1.8610 01	1.8610 01	0.29
12	OEM	-1.476940-04	7.840-05	1.9	0.0531	2.7840 01	3.8470 03	3.8200 03	0.06
13	OPD	3.428560-07	1.330-07	2.6	0.4828	7.2980 02	4.1800 06	4.1080 06	0.24
14	OUP	5.259740-01	1.430-01	3.7	0.1696	2.8250-01	2.1030 00	1.9780 00	0.17
15	LUP	4.649940-01	4.480-02	10.3	0.7835	5.0380 00	1.3250 01	8.2170 00	0.65
16	LWT	2.781210-01	7.210-02	3.9	0.7387	0.0	5.1570 00	5.1570 00	0.25
17	LPC	2.568750-01	7.230-02	3.6	0.8515	1.8990 00	8.8860 00	6.9860 00	0.30

NO. OF OBSERVATIONS	118
NO. OF IND. VARIABLES	17
RESIDUAL DEGREES OF FREEDOM	101
F-VALUE	58.7
RESIDUAL ROOT MEAN SQUARE	0.44314937
RESIDUAL MEAN SQUARE	0.19638136
RESIDUAL SUM OF SQUARES	19.83451750
TOTAL SUM OF SQUARES	189.11850783
MULT. CORREL. COEF. SQUARED	.8951

REQUIRED X(I) PRECISION
(DIGIT RIGHT OF DECIMAL POSITIVE,
LEFT OF DECIMAL NEGATIVE)

IND.VAR(I)	DIGIT
1	-1
2	-1
3	-1
4	-1
5	-2
6	-2
7	-4
8	-2
9	-3
10	-7
11	-1
12	-4
13	-6
14	1
15	1
16	1
17	1

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN15 DEP VAR 11 LMMUNS RESIDUAL ROOT MEAN SQUARE OF FITTED EQUATION: 0.44

STANDARD DEVIATION ESTIMATED FROM RESIDUALS OF NEIGHBORING OBSERVATIONS (OBSERVATIONS 1 TO 4 APART IN FITTED Y ORDER).

NO.	CUMULATIVE STD DEV	ORDERED BY WSSD				ORDERED BY FITTED Y				
		WSSD	OBSV.	OBSV.	DEL RESIDUALS	WSSD	DEL RESIDUALS	FITTED Y	OBSV.	SEQ.
1	0.29	0.0	92	91	0.38	0.74	0.25	-7.15	117	1
2	0.37	0.0	85	84	0.48	7.75	0.44	-7.05	78	2
3	0.43	0.0	88	86	0.56	27.87	0.62	-6.94	98	3
4	0.42	0.00	121	119	0.42	0.0	0.56	-6.76	88	4
5	0.34	0.03	109	108	0.72	24.94	1.01	-6.70	86	5
6	0.42	0.08	10	12	0.34	0.69	0.11	-6.69	128	6
7	0.38	0.11	14	13	0.10	3.42	0.58	-6.58	58	7
8	0.46	0.17	108	31	1.00	0.58	0.99	-6.52	35	8
9	0.47	0.30	128	6	0.83	2.36	0.11	-6.46	16	9
10	0.48	0.42	75	74	0.59	1.34	0.39	-6.41	6	10
11	0.56	0.45	49	83	1.42	0.95	1.15	-6.28	116	11
12	0.58	0.48	6	108	0.76	2.30	1.45	-6.10	108	12
13	0.54	0.51	119	109	0.04	25.94	0.89	-6.09	7	13
14	0.57	0.59	35	10	0.99	14.27	0.19	-5.90	38	14
15	0.55	0.66	82	17	0.33	27.27	0.16	-5.96	112	15
16	0.52	0.66	15	53	0.15	0.42	0.89	-5.68	75	16
17	0.50	0.73	58	114	0.08	10.13	0.48	-5.57	74	17
18	0.48	0.76	65	66	0.28	7.58	0.72	-5.52	71	18
19	0.49	0.76	64	66	0.68	0.98	1.18	-5.52	11	19
20	0.47	0.82	29	48	0.18	23.73	1.11	-5.52	56	20
21	0.50	0.83	13	9	1.11	15.29	0.99	-5.44	111	21
22	0.52	0.95	119	2	1.83	10.93	0.77	-5.34	39	22
23	0.55	0.95	118	120	1.15	25.38	0.42	-5.33	81	23
24	0.54	0.97	107	37	0.33	22.43	0.11	-5.25	76	24
25	0.53	1.04	13	21	0.41	7.68	0.56	-5.23	79	25
26	0.55	1.05	10	40	0.88	2.91	0.29	-5.19	126	26
27	0.56	1.10	27	17	0.93	4.42	0.55	-5.02	99	27
28	0.55	1.14	14	9	0.93	4.21	0.25	-5.00	60	28
29	0.55	1.17	12	40	0.94	5.45	0.83	-4.91	127	29
30	0.54	1.20	54	10	0.13	28.22	0.55	-4.88	14	30
31	0.53	1.20	55	53	0.26	33.76	0.56	-4.86	46	31
32	0.53	1.32	31	10	0.53	12.67	0.10	-4.85	110	32
33	0.52	1.34	0	110	0.39	0.83	1.11	-4.82	13	33
34	0.51	1.38	117	98	0.18	3.42	0.76	-4.78	9	34
35	0.50	1.51	55	15	0.11	11.10	0.51	-4.74	33	35
36	0.51	1.57	2	100	0.97	5.84	0.57	-4.74	28	36
37	0.51	1.58	81	79	0.53	2.25	0.74	-4.70	21	37
38	0.51	1.60	125	67	0.37	11.11	0.13	-4.70	104	38
39	0.50	1.64	94	58	0.32	14.28	0.19	-4.69	18	39
40	0.52	1.69	12	63	1.38	1.51	0.11	-4.64	95	40
41	0.52	1.77	35	100	0.34	13.16	0.13	-4.61	15	41
42	0.52	1.78	10	100	0.65	12.97	0.27	-4.53	8	42
43	0.52	1.80	53	54	0.27	0.14	0.77	-4.52	53	43
44	0.51	1.81	37	85	0.21	4.56	0.42	-4.51	97	44
45	0.52	1.86	31	59	1.07	7.21	0.52	-4.51	110	45
46	0.53	1.88	2	109	0.99	1.28	0.13	-4.45	54	46
47	0.53	1.89	5	110	0.82	3.39	0.45	-4.44	16	47
48	0.53	1.95	120	16	0.52	5.37	0.54	-4.44	58	48
49	0.53	1.98	4	125	0.29	4.64	0.70	-4.29	32	49
50	0.52	2.01	80	83	0.47	12.84	0.33	-4.28	1	50
51	0.53	2.02	17	60	1.10	10.41	0.27	-4.25	40	51
52	0.53	2.10	125	85	0.10	4.86	0.12	-4.20	114	52
53	0.53	2.20	126	127	1.03	13.72	0.41	-4.20	107	53
54	0.53	2.21	10	110	0.50	10.00	0.11	-4.20	3	54
55	0.53	2.23	1	107	0.12	4.36	0.07	-4.21	4	55
56	0.54	2.24	60	27	1.26	5.80	0.10	-4.19	30	56

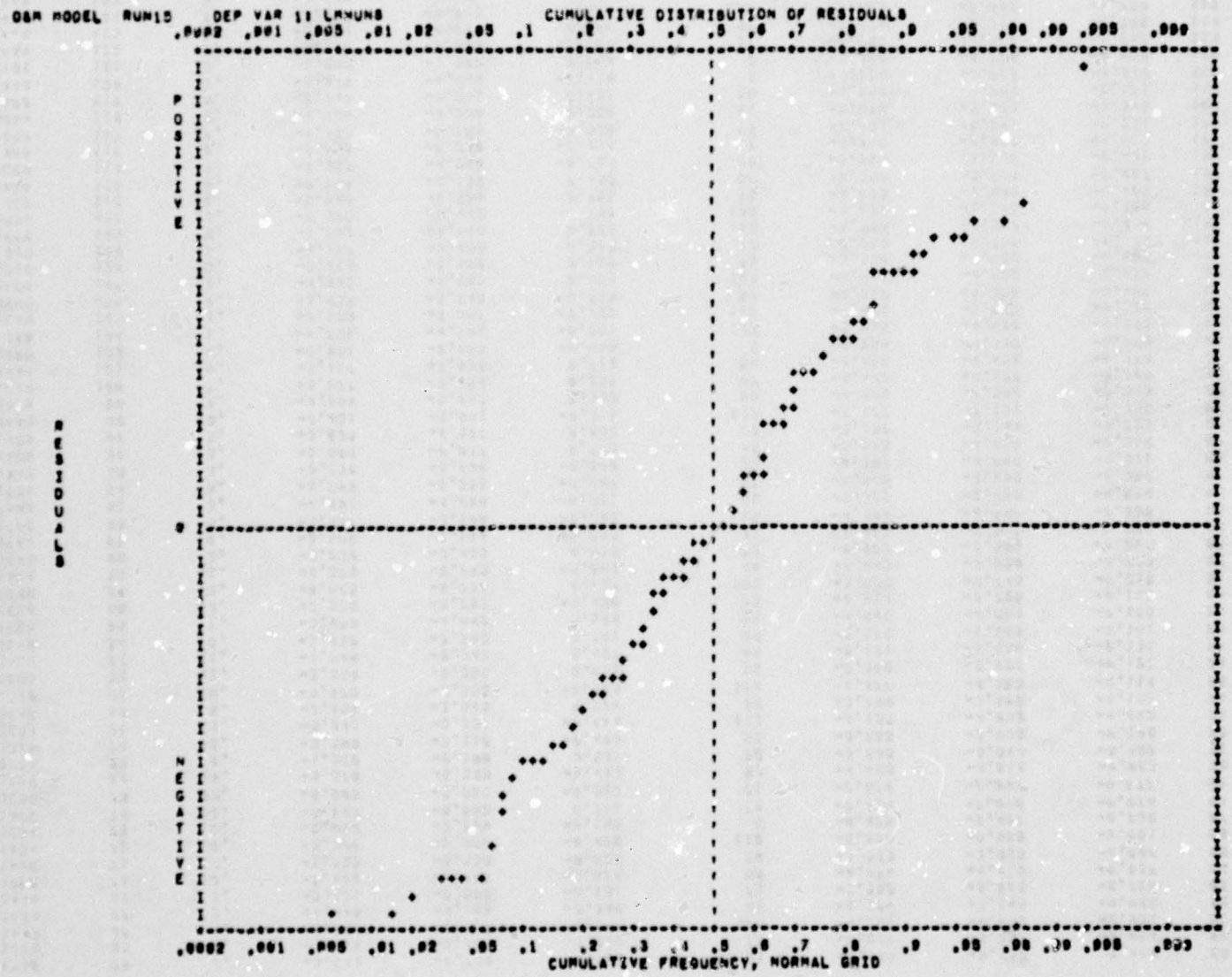


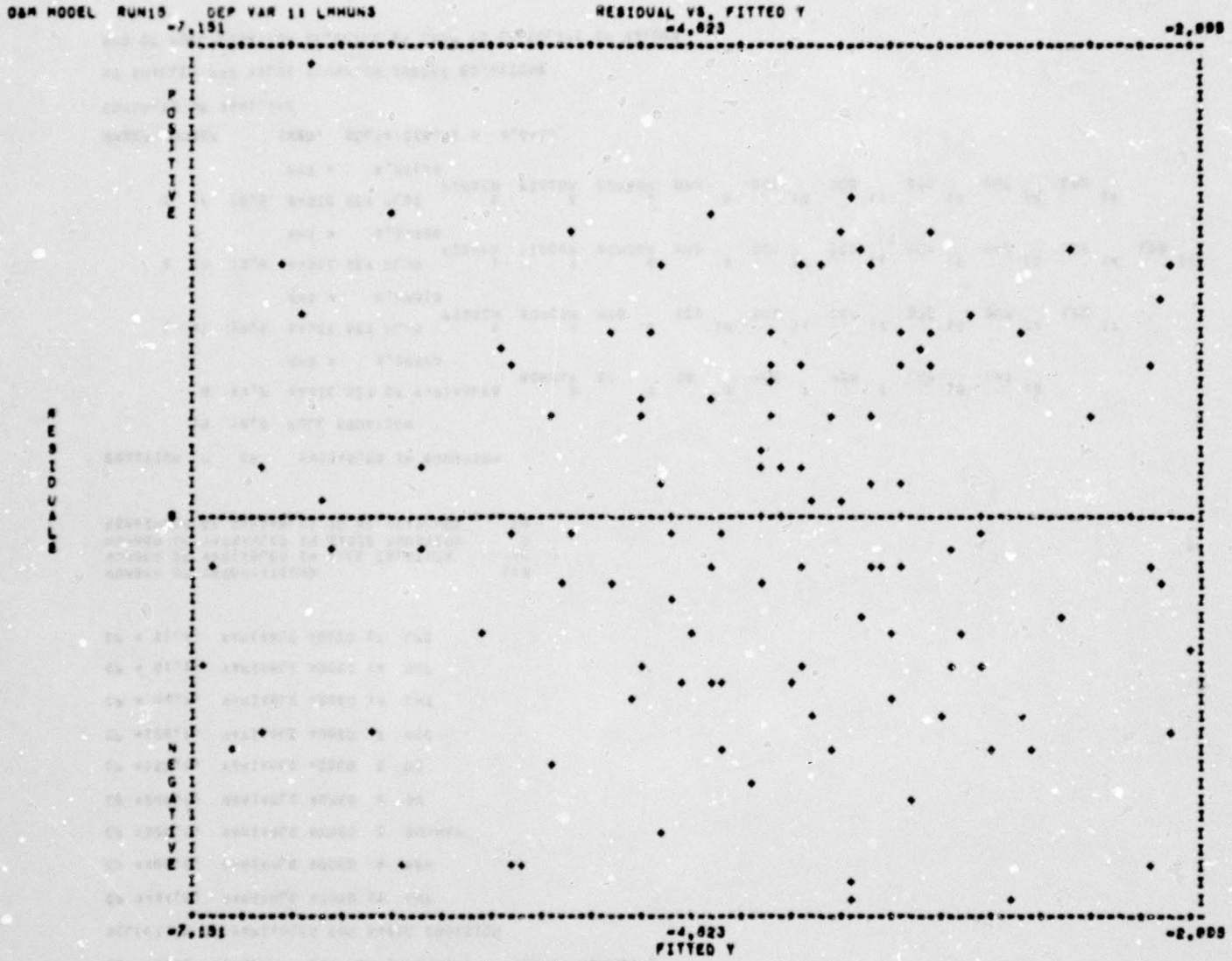
LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&H MODEL RUN15 DEP VAR IS LNHUNS

ORDERED BY COMPUTER INPUT						ORDERED BY RESIDUALS				
IDENT.	OBSV.	NBS DISTANCE	OBS. Y	FITTED Y	RESIDUAL	OBSV.	OBS. Y	FITTED Y	ORDERED RESID.	SEQ
71828	1	1.	-4.158	-4.278	0.129	35	-5.493	-6.521	1.028	1
71L88	2	2.	-4.113	-3.503	-0.610	101	-3.115	-3.825	0.710	2
71M88	3	12.	-3.797	-4.218	0.421	108	-5.414	-6.102	0.688	3
71P48	4	1.	-3.897	-4.285	0.388	97	-3.825	-4.507	0.683	4
71P88	5	4.	-4.894	-4.532	-0.362	24	-2.749	-3.395	0.645	5
71710	6	12.	-6.475	-6.497	0.958	44	-3.203	-3.853	0.650	6
724G8	7	8.	-6.855	-6.893	-0.763	126	-4.547	-5.192	0.645	7
71FA8	9	1.	-5.458	-4.778	-0.688	63	-3.168	-3.755	0.594	8
71F88	10	7.	-4.849	-4.694	-0.155	89	-2.989	-2.678	0.589	9
71CA8	11	4.	-6.266	-5.519	-0.747	31	-3.347	-3.933	0.586	10
71DA8	12	2.	-4.597	-3.815	-0.782	29	-4.155	-4.740	0.585	11
51EA8	13	2.	-4.398	-4.818	0.422	98	-3.586	-4.877	0.578	12
52AA8	14	2.	-4.636	-4.877	0.240	84	-3.131	-3.708	0.568	13
52AB8	15	4.	-4.444	-4.689	-0.235	77	-1.632	-2.198	0.567	14
638D8	16	9.	-5.419	-6.468	0.841	128	-6.128	-6.687	0.559	15
71AE8	17	11.	-3.398	-2.889	-0.509	83	-1.746	-2.243	0.497	16
74JA8	18	2.	-3.811	-3.871	0.060	113	-2.736	-3.198	0.463	17
74JC8	19	3.	-4.925	-4.438	-0.487	58	-6.134	-6.579	0.445	18
52GA1	20	6.	-4.155	-4.740	0.585	27	-2.543	-2.967	0.425	19
71Z48	21	2.	-4.689	-4.784	0.096	99	-4.594	-5.017	0.423	20
73EG8	24	6.	-2.749	-3.395	0.655	13	-4.396	-4.818	0.422	21
73EP8	25	15.	-2.337	-2.590	0.254	119	-3.110	-3.531	0.421	22
73H48	26	18.	-2.372	-2.240	-0.131	3	-3.797	-4.218	0.421	23
73HC8	27	7.	-2.563	-2.987	0.425	90	-3.804	-3.423	0.419	24
73N48	28	15.	-3.227	-3.578	0.353	109	-3.788	-3.466	0.377	25
73Q83	29	8.	-3.359	-3.315	-0.044	74	-5.195	-5.566	0.371	26
73SC8	30	6.	-3.743	-4.082	0.339	28	-3.227	-3.578	0.353	27
73K88	31	1.	-3.347	-3.933	0.586	100	-3.927	-3.388	0.358	28
73KE8	32	5.	-4.852	-4.289	-0.573	56	-5.167	-5.516	0.349	29
73KF8	33	3.	-4.669	-4.744	0.075	64	-1.952	-2.293	0.341	30
73KK8	34	9.	-4.916	-4.148	0.132	30	-3.743	-4.082	0.339	31
75938	35	8.	-5.493	-6.521	1.028	37	-3.856	-4.190	0.333	32
748D8	36	3.	-3.960	-4.195	0.234	4	-3.897	-4.285	0.388	33
748F8	37	4.	-3.856	-4.190	0.333	118	-4.588	-4.848	0.265	34
74818	38	19.	-5.836	-5.962	0.126	118	-4.244	-4.508	0.262	35
78A1P	39	4.	-5.115	-5.348	0.225	25	-2.337	-2.590	0.254	36
78GA8	40	18.	-4.129	-4.285	0.156	43	-3.882	-3.927	0.245	37
74FF8	41	23.	-3.815	-3.588	-0.228	14	-4.836	-4.577	0.240	38
74FA8	42	18.	-3.971	-2.319	-0.756	38	-3.998	-4.195	0.234	39
74FH8	43	7.	-3.682	-3.927	0.245	39	-5.115	-5.340	0.225	40
74FU8	44	26.	-3.293	-3.853	0.559	80	-3.469	-3.693	0.224	41
73CG8	46	28.	-5.173	-4.859	-0.314	40	-4.129	-4.285	0.156	42
74FC8	48	7.	-3.482	-3.259	-0.223	34	-4.016	-4.148	0.132	43
74FJ8	49	2.	-4.614	-3.793	-0.821	1	-4.158	-4.278	0.129	44
74FK8	50	6.	-6.134	-6.579	0.445	38	-5.836	-5.962	0.126	45
74FQ8	51	23.	-3.149	-3.152	0.004	85	-3.958	-4.082	0.124	46
74KA8	52	4.	-3.843	-3.544	-0.299	88	-6.675	-6.785	0.110	47
74KC8	53	3.	-4.596	-4.518	-0.078	65	-3.618	-3.728	0.090	48
74CA8	54	3.	-4.802	-4.452	-0.350	124	-3.457	-3.542	0.085	49
74CB8	55	3.	-4.983	-4.640	-0.343	33	-4.669	-4.744	0.075	50
74CC8	56	3.	-5.167	-5.516	0.349	18	-3.811	-3.871	0.060	51
74FA1	57	8.	-3.503	-3.296	-0.207	123	-3.958	-4.004	0.047	52
74E88	58	3.	-4.474	-4.436	-0.037	16	-6.419	-6.458	0.041	53
73PH8	59	3.	-4.393	-3.906	-0.487	82	-2.364	-2.395	0.031	54
73P88	60	20.	-2.289	-2.578	0.289	125	-4.148	-4.167	0.019	55
73PD8	61	38.	-2.374	-2.297	-0.077	21	-4.689	-6.784	0.016	56
73PF8	62	13.	-3.856	-3.219	-0.637	107	-4.203	-4.281	0.008	57
73PH8	63	3.	-3.168	-3.755	0.594	121	-3.566	-3.570	0.004	58

71AA8	64	2.	-3.131	-3.720	0.588	51	-3.149	-3.182	0.034	59
71QU8	65	2.	-3.618	-3.798	0.098	79	-5.241	-5.227	-0.014	60
63AAR	66	1.	-3.798	-3.689	-0.107	184	-4.721	-4.791	-0.021	61
65AAR	67	2.	-4.448	-4.198	-0.346	91	-3.169	-3.144	-0.025	62
63AG8	68	3.	-5.131	-5.098	-0.131	71	-5.553	-5.525	-0.028	63
63RF8	70	12.	-7.122	-7.048	-0.074	58	-4.474	-4.436	-0.037	64
71A6E	71	14.	-5.553	-5.525	-0.028	29	-3.359	-3.315	-0.044	65
71ADA	72	12.	-3.398	-2.985	-0.425	112	-6.028	-5.959	-0.061	66
73DBA	73	12.	-2.914	-2.729	-0.185	8	-6.475	-6.407	-0.068	67
71ACC	74	32.	-5.195	-5.566	0.371	78	-7.122	-7.048	-0.074	68
73C8Q	75	33.	-5.905	-5.681	-0.223	61	-2.374	-2.297	-0.077	69
73CEN	76	24.	-5.378	-5.255	-0.123	53	-4.686	-4.518	-0.088	70
73CPK	77	6.	-1.832	-2.198	0.367	52	-3.843	-3.844	-0.099	71
73DAM	78	13.	-3.599	-3.118	-0.489	95	-3.738	-3.638	-0.108	72
73ERA	79	12.	-5.241	-5.227	-0.014	122	-4.155	-4.052	-0.102	73
73E9F	80	8.	-3.469	-3.693	0.224	66	-3.796	-3.689	-0.107	74
71C40	81	12.	-5.878	-5.333	-0.543	114	-4.377	-4.263	-0.114	75
73EGB	82	11.	-2.364	-2.395	0.031	78	-5.378	-5.255	-0.123	76
73MC8	83	11.	-1.746	-2.243	0.497	88	-5.131	-5.000	-0.131	77
73LA8	84	8.	-1.952	-2.293	0.341	26	-2.372	-2.240	-0.131	78
77EC8	85	1.	-3.958	-4.082	0.124	18	-4.849	-4.694	-0.155	79
77EE8	86	26.	-7.235	-6.785	-0.450	73	-2.914	-2.729	-0.185	80
77D88	88	26.	-6.875	-6.785	0.110	198	-3.958	-3.743	-0.215	81
78AEA	89	11.	-2.379	-2.995	-0.284	48	-3.482	-3.259	-0.223	82
73<A8	90	2.	-3.884	-3.423	0.419	79	-5.905	-5.681	-0.223	83
639AA	91	6.	-3.149	-3.144	-0.025	41	-3.815	-3.588	-0.228	84
63CAA	92	6.	-3.447	-3.124	-0.323	15	-4.844	-4.609	-0.235	85
659AA	93	3.	-4.391	-4.080	-0.311	89	-2.379	-2.995	-0.284	86
61R8A	94	3.	-3.759	-3.353	-0.407	57	-3.883	-3.298	-0.387	87
61AA8	95	3.	-3.738	-3.638	-0.108	93	-4.391	-4.080	-0.311	88
61488	96	3.	-3.586	-4.077	0.578	46	-5.173	-4.859	-0.314	89
614C8	97	3.	-3.825	-4.587	0.683	92	-3.467	-3.144	-0.323	90
72AA8	98	19.	-7.451	-6.941	-0.511	117	-7.477	-7.151	-0.326	91
72AC8	99	6.	-4.594	-5.017	0.423	55	-4.983	-4.640	-0.343	92
71CAA	100	7.	-3.727	-3.386	0.358	87	-4.446	-4.108	-0.346	93
72EAA	101	9.	-3.115	-3.825	0.710	84	-4.812	-4.452	-0.360	94
72PP8	103	14.	-2.651	-2.183	-0.468	5	-4.894	-4.532	-0.362	95
71JA8	104	1.	-4.721	-4.791	-0.021	127	-5.298	-4.911	-0.385	96
71LA8	105	3.	-4.882	-3.687	-0.395	125	-4.882	-3.887	-0.395	97
72048	106	8.	-3.958	-3.743	-0.215	94	-3.759	-3.353	-0.407	98
72AC8	107	3.	-4.253	-4.261	0.008	120	-4.441	-4.022	-0.418	99
71718	108	9.	-5.414	-6.192	0.688	72	-3.398	-2.965	-0.425	100
71310	109	8.	-3.899	-3.488	0.377	86	-7.235	-6.765	-0.458	101
72PP8	110	8.	-4.588	-4.848	0.265	116	-6.658	-6.200	-0.458	102
72R88	111	15.	-8.283	-5.443	-0.769	103	-2.651	-2.183	-0.468	103
71JCE	112	10.	-6.928	-5.959	-0.951	19	-4.925	-4.438	-0.487	104
72AEP	113	8.	-2.736	-3.198	0.463	59	-4.393	-3.906	-0.487	105
72CC8	114	2.	-4.377	-4.265	-0.114	98	-3.599	-3.110	-0.489	106
71Z8P	116	8.	-6.658	-6.228	-0.458	17	-3.398	-2.889	-0.509	107
71Z0P	117	17.	-7.477	-7.151	-0.326	98	-7.451	-6.941	-0.511	108
658AA	118	2.	-4.244	-4.506	0.262	81	-5.878	-5.333	-0.543	109
63AFP	119	5.	-3.118	-3.531	0.421	32	-4.862	-4.289	-0.573	110
63AA8	120	3.	-4.441	-4.022	-0.418	2	-4.113	-3.503	-0.610	111
63121	121	5.	-3.566	-3.570	0.004	9	-5.466	-4.778	-0.688	112
63AAA	122	7.	-4.155	-4.052	-0.102	11	-6.266	-5.519	-0.747	113
654L8	123	3.	-3.958	-4.004	0.047	42	-3.071	-2.315	-0.756	114
65AY8	124	7.	-3.457	-3.542	0.085	111	-6.283	-5.443	-0.788	115
61AA8	125	2.	-4.148	-4.167	0.019	7	-6.856	-6.093	-0.763	116
61AE8	126	2.	-4.947	-5.192	0.245	12	-4.597	-3.815	-0.782	117
62AA8	127	3.	-5.298	-4.911	-0.385	49	-4.614	-3.792	-0.821	118
64211	128	13.	-6.128	-6.087	0.039	82	-3.856	-3.819	-0.037	119


O&M MODEL RUN15 DEP VAR 11 LMHUNS
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID


O&M MODEL RUN15 DEP VAR IS LMHUN3
RESIDUAL VS. FITTED Y
-7.191
-4.823
-2.455
POSITIVE
RESIDUALS
0
NEGATIVE
-7.191
-4.823
-2.455
FITTED Y

CP VALUES FOR THE SELECTION OF VARIABLES

O&M MODEL RUN15 DEP VAR 11 LMHUNS SEARCH NUMBER 1

SELECTION OF VARIABLES FOR BASIC EQUATION

CP =434.9, VARIABLE ADDED 15 LUP

CP =405.9, VARIABLE ADDED 8 MEM

CP =328.9, VARIABLE ADDED 3 BOMNAV

CP =208.9, VARIABLE ADDED 6 SS

CP =155.6, VARIABLE ADDED 5 OI

CP =126.1, VARIABLE ADDED 7 MCC

CP = 84.7, VARIABLE ADDED 16 LMT

CP = 81.1, VARIABLE ADDED 14 DUF

CP = 81.9, VARIABLE ADDED 17 LPD

NUMBER OF OBSERVATIONS 118
NUMBER OF VARIABLES IN FULL EQUATION 17
NUMBER OF VARIABLES IN BASIC EQUATION 7
REMAINDER OF VARIABLES TO BE SEARCHED 10

EQUATION	P	CP	VARIABLES IN EQUATION
	18	18.0	FULL EQUATION
	8	84.7	BASIC SET OF VARIABLES 3 BOMNAV, 5 OI, 6 SS, 7 MCC, 8 MEM, 15 LUP, 16 LMT
			RMS = 0.29083
1 - 17		18.9	BASIC SET PLUS 1 FIGSEN, 4 BOMCOM, 9 MPD, 10 DCC, 11 DCD, 12 DEM, 13 DPD, 14 DUF, 17 LPD
			RMS = 0.29013
2	18	18.0	BASIC SET PLUS 1 FIGSEN, 2 FIGCOM, 4 BOMCOM, 9 MPD, 10 DCC, 11 DCD, 12 DEM, 13 DPD, 14 DUF, 17 LPD
			RMS = 0.19638
3	17	19.5	BASIC SET PLUS 1 FIGSEN, 2 FIGCOM, 4 BOMCOM, 9 MPD, 10 DCC, 11 DCD, 13 DPD, 14 DUF, 17 LPD
			RMS = 0.28128

SWEEP NUMBER 1883, DELTA Z(K,K) = 4.D-15

ESTIMATE OF VARIANCE

NO SMALLER RMS VALUE FOUND IN SUBSET EQUATIONS

RMS OF FULL EQUATION SELECTED BY USER TO CALCULATE CP VALUES

SEQ	EQUATION	P	ORDERED CP
1	2	18	18.0
2	1	17	18.9
3	3	17	19.5

APPENDIX C

VALIDATION DATA

ALPOS
MULTIPLE REGRESSION ANALYSIS DATA

	FIGSEN UP MTBF	FIGCOM VO MTBMA	BOMNAV WT MHTOT	BOMSEN CC MHUNS	BOMCOM CO MHSMO	CARNAV DI LSCTO	CARCOM EM LSCFD	PS NRTS	XT SRA	SS TRAIN	PD	UF
281 71BA8	0.	0.	0.	0.	0.	0.	0.					
	5514.	1025.	43.30	1379.	1.345	0.0	0.0	0.0	0.0	78.0	311.	2.30
	129.	113.	0.536	0.137	0.398	10.717	7.349	9.1	1071.	1.503		
282 748C8	1.	0.	0.	0.	0.	0.	0.					
	8046.	585.	12.50	878.	1.501	0.0	13.0	0.0	0.0	87.0	58.	2.30
	198.	127.	0.200	0.084	0.111	3.115	2.708	2.8	345.	0.891		
283 749E8	1.	0.	0.	0.	0.	0.	0.					
	3398.	324.	9.30	58.	0.179	0.0	0.0	100.0	0.0	100.0	75.	2.30
	1596.	669.	0.828	0.815	0.813	0.589	0.456	6.5	1021.	0.869		
284 748G8	1.	0.	0.	0.	0.	0.	0.					
	9831.	563.	11.80	209.	0.371	0.0	23.0	0.0	0.0	77.0	24.	2.30
	356.	248.	0.159	0.043	0.104	2.713	2.485	2.9	748.	0.639		
285 748H8	1.	0.	0.	0.	0.	0.	0.					
	9918.	777.	48.80	73.	0.094	0.0	28.0	0.0	0.0	69.0	1888.	2.30
	421.	374.	0.119	0.043	0.070	2.134	2.004	1.1	1986.	0.498		
286 638A8	0.	1.	0.	0.	0.	0.	0.					
	6650.	739.	19.90	988.	1.218	0.0	0.0	0.0	0.0	100.0	254.	2.30
	333.	242.	0.272	0.063	0.209	5.788	2.661	18.3	907.	0.587		
287 73JC8	0.	0.	1.	0.	0.	0.	0.					
	23815.	5733.	181.00	2412.	0.421	0.0	7.0	0.0	25.0	93.2	2200.	1.20
	94.	56.	0.440	0.171	0.268	5.870	5.457	9.0	817.	0.746		
288 73JF8	0.	0.	1.	0.	0.	0.	0.					
	6283.	168.	3.00	82.	0.369	0.0	37.0	0.0	0.0	63.0	20.	1.20
	1272.	682.	0.816	0.811	0.005	0.236	0.236	0.0	885.	0.816		
289 71CA8	0.	0.	0.	0.	0.	1.	0.					
	34287.	1291.	39.90	1711.	1.325	91.2	0.0	0.0	0.0	100.0	240.	1.30
	161.	127.	0.123	0.042	0.080	3.254	1.197	8.0	3198.	0.886		
210 71GA8	0.	0.	0.	0.	0.	1.	0.					
	784.	286.	7.10	476.	1.671	0.0	0.0	0.0	0.0	100.0	66.	1.30
	1836.	985.	0.870	0.824	0.046	1.002	1.002	1.9	331.	0.178		
211 65AA8	0.	0.	0.	0.	0.	0.	1.					
	3173.	1857.	31.00	1230.	0.742	0.0	1.0	0.0	15.0	97.0	98.	1.30
	350.	397.	0.865	0.819	0.046	0.934	0.934	0.0	267.	0.109		

APPENDIX D

RESULTS OF THE

VALIDATION ANALYSIS

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

DAM MODEL RUN#1 DEP VAR IS LMTBF MIN Y = 3.9440 00 MAX Y = 6.9960 10 RANGE Y = 6.9520 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPOS" MODEL
LMTBF = B(0) + B(1)*FIGCOM + B(2)*BOMNAV + B(3)*BOMCOM + B(4)*CARNAV
+ B(5)*CARCOM + B(6)*UP + B(7)*CO + B(8)*DI + B(9)*EM
+ B(10)*MVO + B(11)*MAT + B(12)*MSS + B(13)*MUF + B(14)*DYO
+ B(15)*OAT + B(16)*OPS + B(17)*OAT + B(18)*DSS + B(19)*DPO
+ B(20)*DUF + B(21)*LUP + B(22)*LVO + B(23)*LPO

LMTBF = LN(MTBF)
MTBF = MEAN OPERATING TIME BETWEEN FAILURE

IND,VAR(I)	NAME	COEF,B(I)	S.E. COEF,	T-VALUE	B(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL,IMP,X(I)
0		1.[illegible] P1							
1	FIGCOM	-5.674[illegible]-01	2.440-01	3.3	0.2717	0.0	1.0000 00	1.0000 00	0.14
2	BOMNAV	-1.[illegible] 00	1.940-01	5.9	0.5524	0.0	1.0000 00	1.0000 00	0.23
3	BOMCOM	-1.[illegible] 00	2.470-01	4.8	0.5264	0.0	1.0000 00	1.0000 00	0.23
4	CARNAV	-6.326710-01	1.940-01	3.4	0.1552	0.0	1.0000 00	1.0000 00	0.13
5	CARCOM	-1.[illegible] 00	2.320-01	4.2	0.5467	0.0	1.0000 00	1.0000 00	0.24
6	UP	-3.544720-06	9.440-07	3.8	0.5148	1.5340 02	5.6650 05	5.6630 05	0.49
7	CO	-7.259310-01	4.390-02	5.1	0.3372	4.9230-03	6.6740 00	6.6690 00	0.39
8	DI	1.019920-02	1.530-03	6.6	0.4342	0.0	1.0000 00	1.0000 00	0.29
9	EM	1.[illegible]	2.760-03	6.5	0.5499	0.0	1.0000 00	1.0000 00	0.36
10	MVO	6.[illegible]	9.640-05	5.3	0.9178	-1.2510 03	6.9190 03	8.1700 03	0.99
11	MAT	-1.[illegible]	3.590-03	3.8	0.8448	-3.[illegible] 01	1.4250 02	1.7270 02	0.36
12	MSS	1.25[illegible]	2.250-03	5.6	0.7892	-7.9960 01	2.1060 01	2.9060 02	0.25
13	MUF	-1.[illegible]	1.760-01	2.5	0.0571	-1.4330 00	1.3760 02	2.8110 02	0.17
14	DYO	-1.[illegible]	2.630-08	4.8	0.9185	2.3240 03	2.4740 07	2.4741 07	0.51
15	OAT	1.27[illegible]	4.690-05	2.7	0.7496	3.6660 00	1.1750 04	1.1750 04	0.36
16	OPS	2.41[illegible]	1.220-04	2.0	0.3921	3.6590 01	2.6690 03	2.9790 03	0.14
17	OAT	-1.[illegible]	9.330-05	1.9	0.1269	2.9990 02	3.3370 03	3.7410 03	0.28
18	DSS	2.35[illegible]	7.880-05	3.3	0.9385	1.3490 01	2.6790 03	2.7160 03	0.13
19	DPO	-4.[illegible]	1.260-07	3.5	0.3518	6.2590 02	4.1810 06	4.1860 06	0.36
20	DUF	-6.[illegible]	1.650-01	5.2	0.7787	1.7840-01	2.9160 02	1.8480 02	0.31
21	LUP	-7.[illegible]	5.550-02	4.2	0.7757	5.9380 00	1.2250 01	8.2170 00	0.38
22	LVO	-9.[illegible]	1.370-01	7.8	0.9283	3.4210 00	9.9120 00	6.9110 00	1.07
23	LPO	-9.[illegible]	4.660-02	1.9	0.6342	1.0990 03	6.9960 00	6.9960 00	0.12

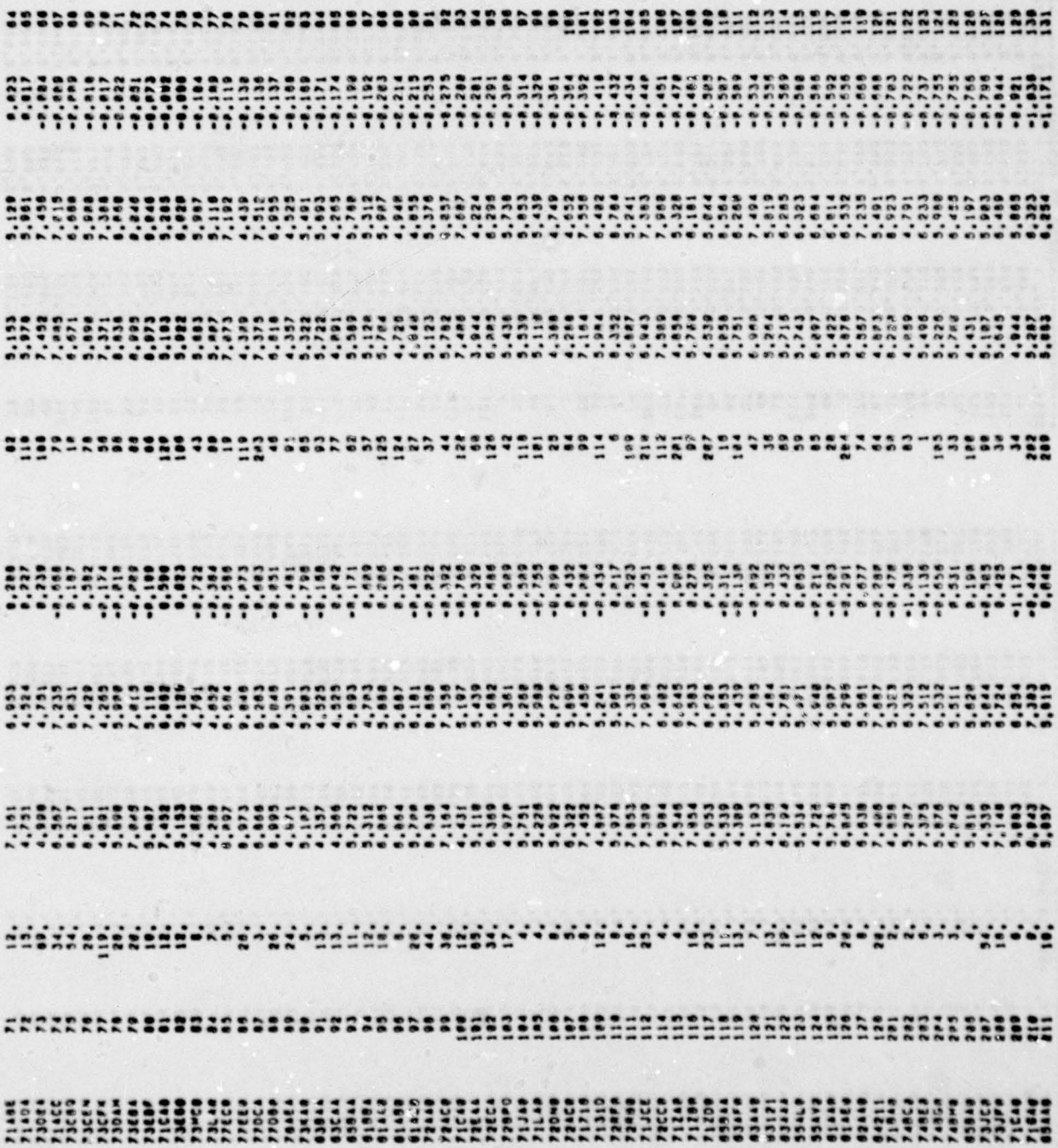
NO. OF OBSERVATIONS 131
NO. OF IND. VARIABLES 23
RESIDUAL DEGREES OF FREEDOM 107
F-VALUE 31.7
RESIDUAL ROOT MEAN SQUARE .68737033
RESIDUAL MEAN SQUARE .23753681
RESIDUAL SUM OF SQUARES 25.41583987
TOTAL SUM OF SQUARES 199.75979614
MULT. CORREL. COEF. SQUARED .8721

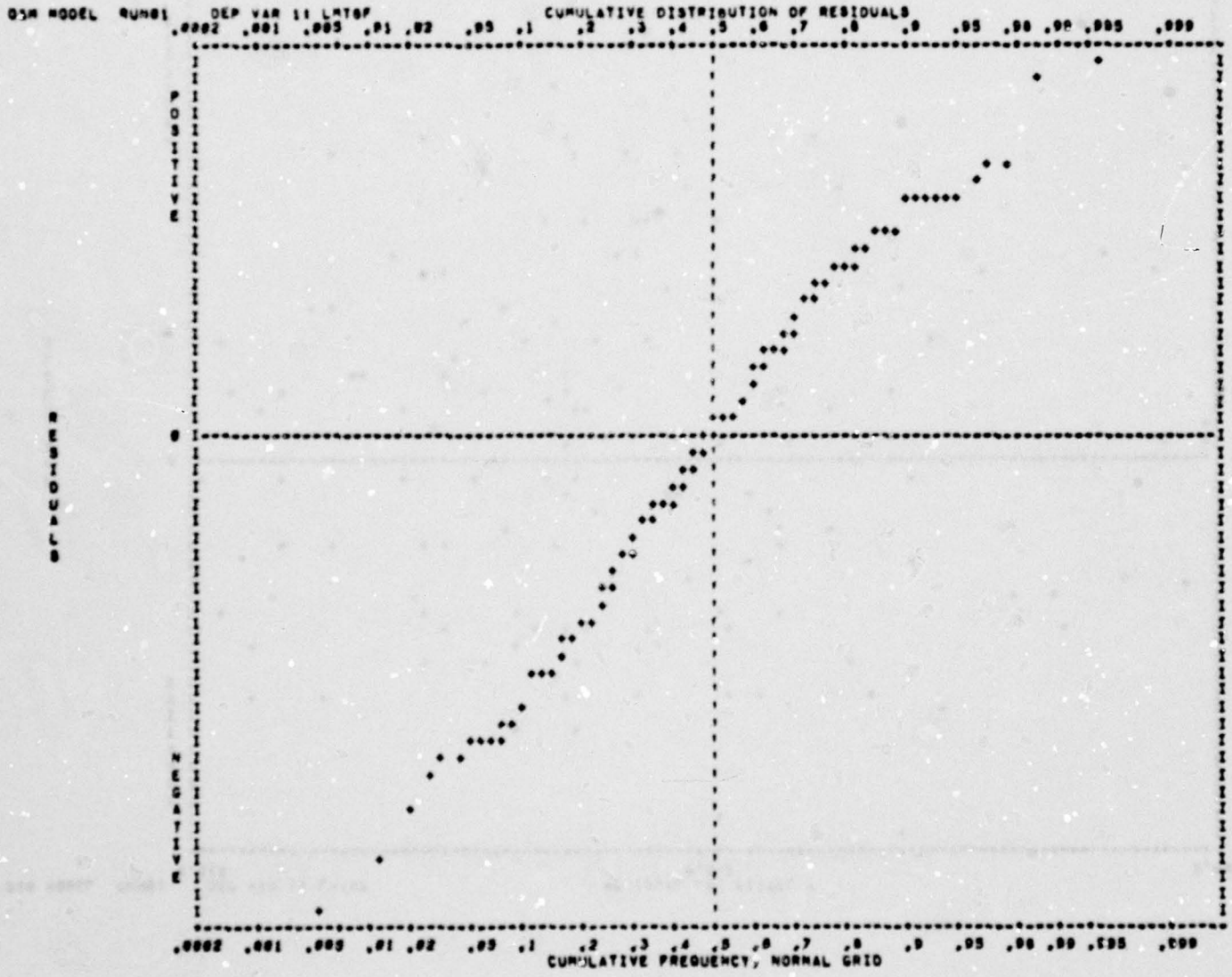
IND,VAR(I)	NAME	COEF,B(I)	MIN X(I)	MAX X(I)	RANGE X(I)	REL,IMP,X(I)
*** COEFFICIENTS FROM PREVIOUS FIT ***						
0		1.579730 01				
1	FIGCOM	-7.784[illegible]	0.0	1.0000 00	1.0000 00	0.15
2	BOMNAV	-1.[illegible]	0.0	1.0000 00	1.0000 00	0.25
3	BOMCOM	-1.[illegible]	0.0	1.0000 00	1.0000 00	0.24
4	CARNAV	-6.[illegible]	0.0	1.0000 00	1.0000 00	0.11
5	CARCOM	-1.[illegible]	0.0	1.0000 00	1.0000 00	0.24
6	UP	-3.[illegible]	1.5340 02	5.6650 05	5.6630 05	0.41
7	CO	-7.[illegible]	4.9230-03	6.6740 00	6.6690 00	0.29
8	DI	1.[illegible]	0.0	1.0000 00	1.0000 00	0.29
9	EM	1.[illegible]	0.0	1.0000 00	1.0000 00	0.36
10	MVO	5.[illegible]	-1.2510 03	6.9190 03	8.1700 03	0.87
11	MAT	-1.[illegible]	-3.8260 01	1.4250 02	1.7270 02	0.36
12	MSS	1.[illegible]	-7.9960 01	2.1060 01	2.9060 02	0.26
13	MUF	-3.[illegible]	-1.4330 00	1.3760 02	2.8110 02	0.17
14	DYO	-1.[illegible]	2.3240 03	2.4740 07	2.4740 07	0.52
15	OAT	1.27[illegible]	3.6660 00	1.1750 04	1.1750 04	0.36
16	OPS	9.21[illegible]	3.6590 01	2.6690 03	2.9290 03	0.13
17	OAT	-1.[illegible]	2.9990 02	3.3370 03	3.7410 03	0.28
18	DSS	2.26[illegible]	1.3490 01	2.6790 03	2.6990 03	0.13
19	DPO	-4.[illegible]	6.2590 02	4.1810 06	4.1860 06	0.33
20	DUF	-6.[illegible]	1.7840-01	2.9160 02	1.8480 02	0.32
21	LUP	-8.[illegible]	5.9380 00	1.2250 01	6.2170 00	0.39
22	LVO	-9.[illegible]	3.4210 00	9.9120 00	6.9110 00	1.03
23	LPO	-9.[illegible]	1.0990 03	6.9960 00	6.9960 00	0.14

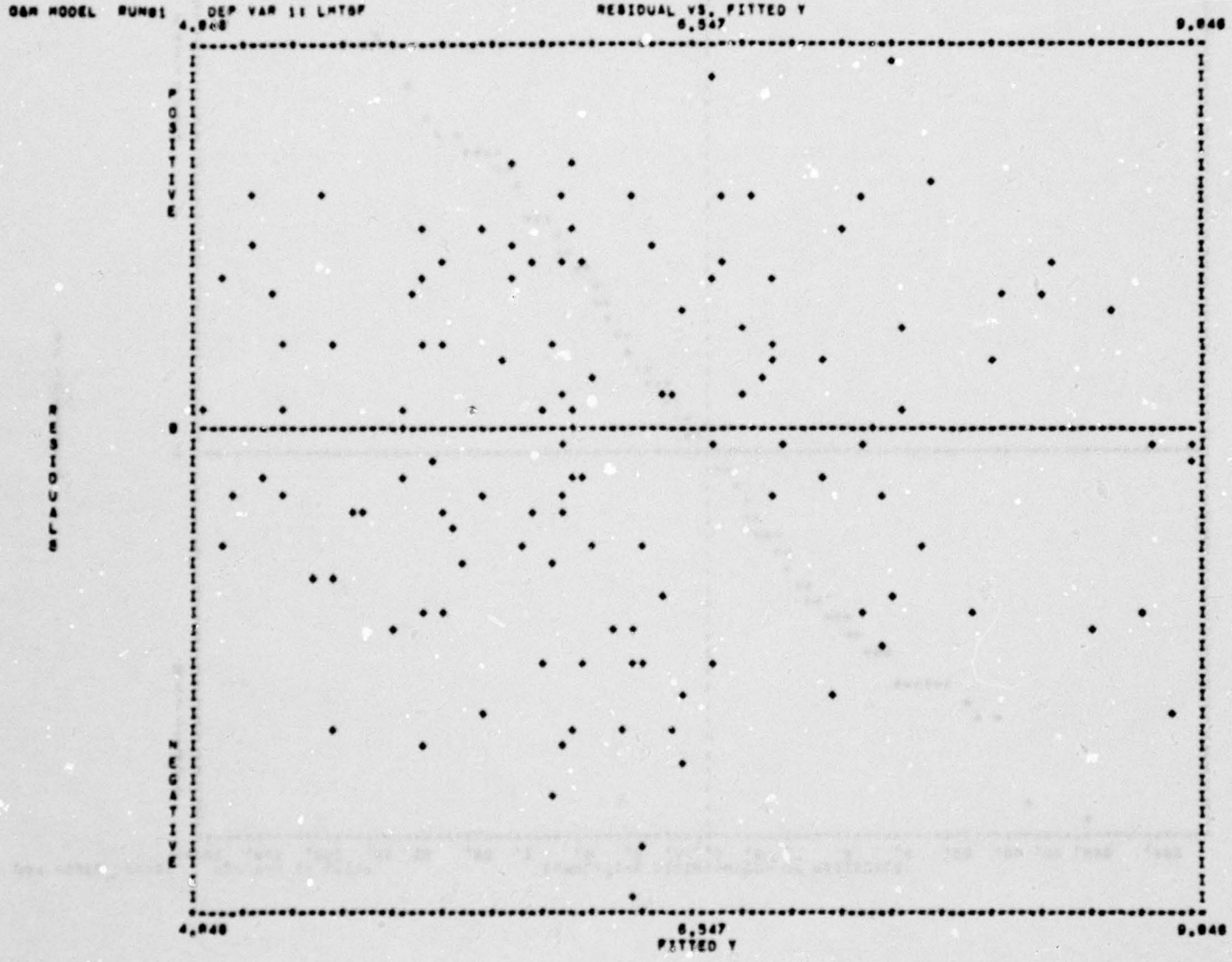
RESIDUAL ROOT MEAN SQUARE .69979627
RESIDUAL MEAN SQUARE .24488898
RESIDUAL SUM OF SQUARES 25.77425459
TOTAL SUM OF SQUARES 199.75979614
MULT. CORREL. COEF. SQUARED .8992

IDENT.	OBSV.	NBR	DISTANCE	OBS. Y	FITTED Y	RESIDUAL
71BPB	5		3.	5.496	6.233	-0.737
71L8D	2		6.	5.584	5.218	0.366
71P8B	5		4.	6.510	5.931	0.579
71710	6		22.	8.352	8.784	-0.432
724G8	7		15.	8.445	8.083	0.362
71G53	8		4.	5.428	5.213	0.215
71FA8	9		14.	7.352	7.182	0.170
71F89	10		16.	6.071	6.880	-0.809
71CAP	11		10.	8.489	7.535	0.954
71DA8	12		2.	6.496	5.975	0.521
91EA2	13		3.	7.037	6.919	2.118
92348	14		4.	7.141	6.981	0.160
92A8A	15		5.	7.348	6.941	0.408
83BD8	16		23.	8.858	8.584	-0.707
71AEP	17		18.	5.542	5.301	0.242
74JA8	18		185.	6.204	6.052	0.151
74JC8	19		8.	7.073	7.192	-0.119
92GA1	20		15.	5.422	6.914	-0.592
71Z48	21		3.	6.994	6.817	0.987
71Z9A	22		15.	8.428	7.755	0.654
73EP8	23		18.	4.388	4.749	-0.361
73MC8	24		35.	4.617	4.226	0.391
73MCA	27		4.	4.640	4.855	-0.215
73Q98	29		4.	5.137	5.898	0.239
733C8	30		5.	5.645	6.489	-0.844
73KEA	32		2.	6.439	6.007	0.432
73KF8	33		2.	5.728	6.455	-0.755
73KK8	34		5.	4.944	5.865	-0.921
75934	35		28.	8.675	8.311	0.364
748DP	36		6.	5.264	5.819	-0.556
748F8	37		5.	5.123	5.376	-0.253
7491P	38		19.	7.664	7.612	0.052
78A1P	39		3.	7.322	6.703	0.619
78GA8	40		15.	5.987	5.983	0.003
74FF8	41		16.	5.738	5.321	0.417
74FA8	42		59.	5.438	5.738	-0.300
74FM8	43		7.	5.883	5.987	-0.104
74FU8	44		42.	5.792	6.067	-0.275
73CM8	45		7.	6.808	6.514	0.294
73CG8	46		19.	6.818	6.955	-0.137
858M8	47		4.	6.958	7.494	-0.534
74FCA	48		4.	5.775	5.241	0.534
74FJ8	49		5.	6.466	5.958	0.517
74FK8	50		18.	8.229	8.923	-0.703
74F08	51		22.	5.515	5.172	0.343
74MA8	52		12.	6.926	5.986	0.949
74KCA	53		4.	6.553	6.472	0.082
74CA8	54		5.	7.959	6.674	0.286
74C8P	55		8.	7.100	6.819	0.281
74CC8	56		5.	7.371	7.388	-0.017
74FA1	57		23.	5.128	5.312	-0.192
74E8A	58		3.	6.516	6.417	0.099
73PM8	59		2.	5.743	6.323	-0.580
73P8P	60		28.	3.944	4.224	-0.281
73P08	61		44.	4.114	4.048	0.066
73PF8	62		18.	5.589	5.789	-0.199
71Y48	64		5.	4.893	5.491	-0.598
710U8	65		5.	5.322	5.491	-0.169
834A8	66		4.	5.542	5.475	0.067
85AA8	67		7.	6.131	5.648	0.483
834G8	68		8.	6.834	6.377	0.458
859C8	69		11.	5.716	6.285	-0.569
838F8	70		37.	8.751	8.333	0.418

OBSV.	OBS. Y	FITTED Y	ORDERED RESID.	SEQ
11	8.489	7.535	0.954	1
115	7.546	6.645	0.900	2
102	6.369	5.682	0.686	3
127	6.038	5.961	0.077	4
22	6.428	7.755	0.654	5
39	7.382	6.783	0.619	6
94	5.312	4.783	0.529	7
103	4.970	4.361	0.609	8
87	6.866	6.263	0.603	9
81	7.452	6.852	0.599	10
78	8.811	7.429	0.382	11
5	6.510	5.931	0.579	12
48	5.775	5.241	0.534	13
285	6.042	5.511	0.531	14
111	7.853	7.330	0.523	15
12	6.496	5.975	0.521	16
49	6.468	5.958	0.517	17
87	8.131	5.648	0.483	18
89	4.871	4.391	0.481	19
68	6.834	6.377	0.458	20
122	6.194	5.761	0.432	21
107	6.322	5.890	0.432	22
32	6.439	6.007	0.432	23
288	7.148	6.724	0.425	24
78	8.751	8.333	0.418	25
41	5.738	5.321	0.417	26
15	7.348	6.941	0.408	27
26	4.617	4.226	0.391	28
2	5.584	5.218	0.366	29
54	7.959	8.674	0.286	30
96	6.964	5.687	0.279	31
35	8.675	8.311	0.364	32
7	8.445	8.083	0.362	33
121	4.836	4.484	0.352	34
51	5.515	5.172	0.343	35
117	8.953	8.628	0.325	36
45	6.808	6.514	0.294	37
55	7.188	6.819	0.281	38
118	7.654	7.383	0.270	39
17	5.542	5.301	0.242	40
73	4.990	4.751	0.239	41
72	4.751	4.524	0.227	42
8	5.428	5.213	0.215	43
71	7.161	6.953	0.208	44
95	6.085	5.888	0.206	45
298	5.818	5.628	0.190	46
75	8.217	8.031	0.187	47
9	7.352	7.182	0.170	48
14	7.141	6.981	0.160	49
18	6.204	6.052	0.151	50
13	7.037	6.919	0.118	51
58	5.516	6.417	0.099	52
21	6.984	6.817	0.067	53
69	5.987	5.903	0.083	54
97	6.553	6.472	0.082	55
6	5.542	5.475	0.067	56
61	4.114	4.048	0.066	57
123	5.534	5.471	0.063	58
38	7.654	7.612	0.052	59
211	5.857	5.815	0.042	60
92	4.566	4.525	0.042	61
52	6.028	5.988	0.040	62
29	5.137	5.098	0.039	63




BSM MODEL RUN81 DEP VAR 11 LMTBF
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID


G&R MODEL RUN#1 DEP VAR 1: LMTSF
RESIDUAL VS. FITTED Y
4.048
6.547
9.046
POSITIVE
0
NEGATIVE
RESIDUALS
4.048
6.547
9.046
FITTED Y

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN20 DEP VAR IS LMTBMA MIN Y = 3,4810 00 MAX Y = 8,9270 00 RANGE Y = 5,4460 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALFGA" MODEL
LMTBMA = B(0) + B(1)FIGCOM + B(2)HOMNAV + B(3)SQNCOM + B(4)CARNAV
+ B(5)CARCOM + B(6)UP + B(7)CO + B(8)DI + B(9)EM
+ B(10)MVO + B(11)MWT + B(12)MSS + B(13)MUP + B(14)DVO
+ B(15)DWT + B(16)DPS + B(17)DST + B(18)DSS + B(19)DPO
+ B(20)DUP + B(21)LUP + B(22)LVO + B(23)LPO
LMTBMA = LN(MTBMA)
MTBMA = MEAN OPERATING TIME BETWEEN MAINTENANCE ACTIONS

IND,VAR(I)	NAME	COEF,B(I)	S.E. COEF.	T-VALUE	B(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL.IMP.B(I)
0		1,469470 01							
1	FIGCOM	-6,917320-01	2,050-01	3,3	0,2717	0,0	1,0000 00	1,0000 00	0,13
2	HOMNAV	-1,167260 00	1,920-01	6,1	0,5524	0,0	1,0000 00	1,0000 00	0,21
3	SQNCOM	-1,139300 00	2,410-01	4,7	0,5288	0,0	1,0000 00	1,0000 00	0,21
4	CARNAV	-5,947500-01	1,810-01	3,3	0,5682	0,0	1,0000 00	1,0000 00	0,11
5	CARCOM	-1,755190 00	2,260-01	4,4	0,5947	0,0	1,0000 00	1,0000 00	0,18
6	UP	-2,855310-06	9,310-07	2,9	0,6346	1,5380 02	5,8630 05	5,8630 05	0,26
7	CO	-2,853030-01	4,320-02	4,6	0,3572	4,9230-03	8,8740 00	8,8690 00	0,25
8	DI	7,944710-03	1,320-03	5,3	0,4342	0,0	1,0000 02	1,0000 02	0,15
9	EM	1,784780-02	2,740-03	6,6	0,5409	0,0	1,0000 02	1,0000 02	0,33
10	MVO	5,479180-04	8,580-05	5,8	0,9196	-1,2510 03	6,9190 03	8,1700 03	0,82
11	MWT	-1,119570-02	3,450-03	3,2	0,8448	-3,9240 01	1,4250 02	1,7270 02	0,35
12	MSS	1,084150-02	2,220-03	4,9	0,7092	-7,9990 01	2,1990 01	1,9990 02	0,29
13	MUP	-5,724770-01	1,220-01	3,1	0,6581	-1,4390 00	1,3790 00	2,8990 00	0,19
14	DVO	-9,929540-08	2,590-08	3,8	0,8146	2,3940 03	2,4740 07	2,4740 07	0,45
15	DWT	1,295760-04	4,630-05	2,8	0,7795	3,6660 00	1,1750 04	1,1750 04	0,20
16	DPS	2,144410-04	1,290-04	1,8	0,3621	3,8490 01	2,9290 03	2,9290 03	0,12
17	DST	-1,465990-04	9,280-05	1,6	0,5269	2,9890 02	3,3370 03	3,0410 03	0,08
18	DSS	2,184330-04	6,980-05	3,1	0,9399	1,3490 01	2,8790 00	2,8660 03	0,11
19	DPO	-3,446810-07	1,260-07	2,7	0,3518	8,2590 02	4,1810 05	4,1820 05	0,26
20	DUP	-7,577790-01	1,630-01	4,7	0,3787	1,7640-01	2,0180 00	1,8440 00	0,26
21	LUP	-2,865640-01	5,450-02	4,9	0,7757	5,0390 00	1,3250 01	8,2170 00	0,41
22	LVO	-8,195440-01	1,350-01	6,1	0,9283	3,4810 00	9,0170 00	5,5110 00	0,84
23	LPO	-9,402840-02	4,790-02	2,0	0,9382	1,0990 00	8,0980 00	6,9980 00	0,18

NO. OF OBSERVATIONS	131
NO. OF IND. VARIABLES	23
RESIDUAL DEGREES OF FREEDOM	107
F-VALUE	29,7
RESIDUAL ROOT MEAN SQUARE	0,48819977
RESIDUAL MEAN SQUARE	0,23759182
RESIDUAL SUM OF SQUARES	24,67332430
TOTAL SUM OF SQUARES	102,18723383
MULT. CORREL. COEF. SQUARED	,8848

IND,VAR(I)	NAME	COEF,B(I)	MIN X(I)	MAX X(I)	RANGE X(I)	REL.IMP.B(I)
••• COEFFICIENTS FROM PREVIOUS FIT •••						
0		1,479770 01				
1	FIGCOM	-7,857240-01	0,0	1,0000 00	1,0000 00	0,14
2	HOMNAV	-1,171090 00	0,0	1,0000 00	1,0000 00	0,22
3	SQNCOM	-1,183910 00	0,0	1,0000 00	1,0000 00	0,22
4	CARNAV	-5,714540-01	0,0	1,0000 00	1,0000 00	0,10
5	CARCOM	-1,877550 00	0,0	1,0000 00	1,0000 00	0,24
6	UP	-2,818260-06	1,5380 02	5,8630 05	5,8630 05	0,29
7	CO	-2,[illegible]	4,9230-03	8,8740 00	8,8690 00	0,25
8	DI	8,227710-03	0,0	1,0000 02	1,0000 02	0,15
9	EM	1,829380-02	0,0	1,0000 02	1,0000 02	0,34
10	MVO	5,551780-04	-1,2510 03	6,9190 03	8,1700 03	0,83
11	MWT	-1,155590-02	-3,9240 01	1,4250 02	1,7270 02	0,37
12	MSS	1,128750-02	-7,9990 01	2,1990 01	1,9990 02	0,21
13	MUP	-5,735560-01	-1,4390 00	1,3790 00	2,8990 00	0,19
14	DVO	-1,[illegible]	2,3940 03	2,4740 07	2,4740 07	0,48
15	DWT	1,359630-04	3,6660 00	1,1750 04	1,1750 04	0,20
16	DPS	2,214120-04	3,8490 01	2,9290 03	2,9290 03	0,12
17	DST	-1,[illegible]	2,9890 02	3,3370 03	3,0410 03	0,10
18	DSS	2,[illegible]	1,3490 01	2,8790 00	2,8660 03	0,11
19	DPO	-3,[illegible]	8,2590 02	4,1810 05	4,1820 05	0,24
20	DUP	-7,731790-01	1,7640-01	2,0180 00	1,8440 00	0,26
21	LUP	-2,892250-01	5,0390 00	1,3250 01	8,2170 00	0,41
22	LVO	-8,007840-01	3,4810 00	9,0170 00	5,5110 00	0,83
23	LPO	-1,961850-01	1,0990 00	8,0980 00	6,9980 00	0,13

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN20 DEP VAR IS LMTBMA

COMPONENT EFFECT OF EACH VARIABLE ON EACH OBSERVATION (IN UNITS OF Y)
(VARIABLES ORDERED BY THEIR RELATIVE INFLUENCE --- OBSERVATIONS ORDERED BY INFLUENCE OF MOST INFLUENTIAL VARIABLE)

SEQ.	OBSV.	VARIABLES													
		10	22	14	21	11	9	6	15	20	7	19	3	2	12
		5	13	8	1	23	16	18	4	17					
		MVO	LVO	OVO	LUP	MNT	EN	UP	ONT	DUF	CD	DPD	BOMCOM	BOMNAV	MBB
		CARCOM	MUF	DI	FIGCOM	LPD	OPS	OSS	CARNAV	DET					
1	77	3.84	-1.95	-1.91	-0.15	-1.08	-0.16	0.85	0.89	0.12	0.24	-0.01	0.00	-1.03	-0.16
		0.10	0.16	-0.19	0.85	-0.01	0.02	-0.36	0.88	0.21					
2	18	3.75	-1.94	-1.75	-0.28	0.11	-0.16	0.82	-0.83	0.00	0.25	-0.05	0.00	0.14	0.21
		0.10	-0.21	-0.19	0.85	0.07	-0.42	0.83	0.88	-0.04					
3	73	2.99	-1.76	-0.47	0.16	-0.68	-0.16	0.89	-0.28	0.12	0.24	0.06	0.00	-1.03	-0.02
		0.10	0.16	-0.19	0.85	-0.26	0.02	-0.22	0.88	0.21					
4	101	2.99	-1.76	-0.47	0.28	-0.65	-0.16	0.89	-0.22	0.05	0.24	0.06	0.00	0.14	-0.02
		0.10	0.20	-0.19	0.85	-0.26	0.02	-0.22	-0.49	0.21					
5	207	2.48	-1.67	-0.03	-0.21	-0.01	-0.03	0.04	-0.12	0.05	0.17	-0.27	0.00	-1.03	0.15
		0.10	0.20	-0.19	0.85	-0.29	0.02	-0.07	0.88	0.21					
6	42	2.25	-1.61	0.16	-0.72	-1.65	-0.16	-0.34	1.30	0.00	0.28	0.04	0.00	0.14	0.02
		0.10	-0.21	-0.19	0.85	-0.07	0.02	0.04	0.88	-0.31					
7	102	1.65	-1.42	0.51	0.44	-0.37	-0.16	0.10	-0.20	0.05	0.05	-0.01	0.00	0.14	-0.00
		0.10	0.20	-0.19	0.85	-0.01	0.02	0.21	-0.49	-0.04					
8	81	1.55	-1.39	0.54	-0.69	-1.32	-0.16	-0.29	0.57	0.05	0.22	-1.00	0.00	0.14	0.23
		0.10	0.20	-0.19	0.85	-0.32	0.02	0.06	0.88	-0.31					
9	44	1.32	-1.31	0.59	-0.78	-0.91	1.67	-0.39	-0.02	0.00	0.25	0.10	0.00	0.14	-0.00
		0.10	-0.21	-0.19	0.85	-0.11	0.02	0.21	0.88	-0.04					
10	23	1.06	-1.19	0.61	-0.93	-0.45	0.10	-0.06	-0.28	0.00	0.09	0.09	0.00	0.14	0.07
		0.10	-0.21	0.02	0.85	-0.25	0.02	-0.10	0.88	-0.04					
11	78	0.99	-1.16	0.61	0.17	-0.31	0.06	0.09	-0.28	0.12	0.24	0.02	0.00	-1.03	-0.00
		0.10	0.16	-0.19	0.85	-0.05	0.02	0.21	0.88	-0.04					
12	57	0.79	-1.06	0.58	-0.28	-0.27	-0.16	0.04	-0.27	-1.21	-0.06	-0.03	0.00	0.14	0.23
		0.10	-0.21	0.61	0.85	0.01	0.02	0.06	0.88	-0.04					
13	80	0.77	-1.05	0.58	-0.37	-0.70	-0.16	-0.01	-0.19	-1.38	0.07	0.17	0.00	0.14	0.22
		0.10	0.24	-0.19	0.85	-0.23	0.02	0.04	0.88	-0.31					
14	52	0.75	-1.04	0.56	-0.45	-0.29	-0.16	-0.05	-0.19	0.00	0.21	-0.00	0.00	0.14	0.23
		0.10	-0.21	-0.19	0.85	-0.02	-0.09	0.00	0.88	-0.04					
15	103	0.67	-0.99	0.55	-0.85	-0.51	-0.14	-0.01	-0.27	0.05	-0.11	0.10	0.00	0.14	0.22
		0.10	0.20	0.05	0.85	-0.17	0.02	0.05	-0.49	-0.04					
16	82	0.60	-0.95	0.53	-0.87	-0.23	-0.16	-0.04	-0.26	0.05	0.04	0.05	0.00	0.14	0.23
		0.10	0.20	0.52	0.05	-0.07	0.02	0.06	0.88	-0.04					
17	41	0.56	-0.93	0.52	-0.82	-0.11	-0.16	-0.52	-0.21	0.00	-0.42	0.17	0.00	0.14	0.23
		0.10	-0.21	0.61	0.85	-0.23	0.02	0.06	0.88	-0.04					
18	19	0.35	-0.78	0.43	-0.24	0.12	-0.15	0.03	-0.02	0.00	0.06	0.20	0.00	0.14	0.03
		0.10	-0.21	0.52	0.85	-0.21	-0.07	0.06	0.88	-0.04					
19	60	0.35	-0.78	0.43	-1.07	-0.23	-0.16	-1.49	-0.26	0.05	-0.00	0.15	0.00	0.14	0.23
		0.10	0.20	0.53	0.05	-0.13	0.02	0.06	0.88	-0.04					
20	94	0.33	-0.77	0.42	0.16	-0.21	-0.16	0.09	-0.25	0.12	0.11	0.09	-1.10	0.14	-0.11
		0.10	0.16	-0.19	0.85	-0.10	0.02	-0.34	0.88	-0.04					
21	43	0.33	-0.77	0.42	-0.37	-0.05	-0.16	-0.01	-0.15	0.00	0.15	0.07	0.00	0.14	0.23
		0.10	-0.21	-0.19	0.85	-0.26	0.22	0.06	0.88	-0.04					
22	93	0.32	-0.76	0.42	0.27	0.02	-0.14	0.09	-0.11	0.12	0.12	-0.05	-1.10	0.14	0.20
		0.10	0.16	-0.19	0.85	0.05	-0.12	0.01	0.88	0.14					
23	110	0.32	-0.76	0.42	0.27	0.02	-0.14	0.09	-0.11	0.05	0.10	-0.05	0.00	0.14	0.20
		-0.97	0.20	-0.19	0.85	0.05	-0.12	0.01	0.88	0.14					
24	85	0.27	-0.72	0.39	0.02	-0.16	-0.07	0.08	-0.23	0.12	0.15	0.08	0.00	0.14	0.17
		0.10	0.16	-0.18	0.85	-0.10	0.02	-0.04	0.88	-0.04					
25	51	0.26	-0.71	0.39	-0.85	-1.49	-0.16	-0.23	0.92	0.00	-0.78	0.10	0.00	0.14	0.23
		0.10	-0.21	0.59	0.85	-0.16	0.02	0.06	0.88	-0.04					
26	100	0.26	-0.71	0.38	0.32	-0.33	-0.16	0.10	-0.28	0.05	0.15	0.13	0.00	0.14	-0.00
		0.10	0.20	-0.19	0.85	-0.13	0.02	0.21	-0.49	0.21					

60	201	-0.14	-0.29	0.12	0.18	-0.14	-0.16	0.09	-0.22	0.08	-0.02	0.06	0.08	0.14	-0.02
		0.18	-0.21	-0.19	0.85	-0.08	0.02	-0.27	0.88	-0.04					
61	59	-0.15	-0.23	0.08	-0.29	-0.01	-0.15	0.02	-0.14	0.05	0.03	0.12	0.08	0.14	0.23
		0.18	0.20	-0.19	0.89	-0.13	0.22	0.06	0.08	-0.04					
62	58	-0.18	-0.23	0.08	-0.34	0.14	-0.15	-0.08	0.07	0.00	-0.12	-0.02	0.08	0.14	0.22
		0.18	-0.21	0.46	0.85	0.01	-0.09	0.05	0.08	-0.04					
63	46	-0.21	-0.18	0.06	-0.38	0.22	1.67	-0.02	0.10	-0.35	0.24	-0.06	0.08	0.14	-0.08
		0.18	0.34	-0.19	0.85	0.09	0.02	0.21	0.08	-0.04					
64	12	-0.23	-0.15	0.04	-0.28	0.01	-0.16	0.02	-0.12	0.08	0.25	-0.06	0.08	0.14	0.15
		0.18	-0.21	-0.19	0.85	0.08	0.02	-0.07	0.08	0.21					
65	33	-0.25	-0.11	0.02	0.18	0.04	-0.11	0.09	-0.10	0.08	0.19	0.20	0.08	0.14	0.18
		0.18	-0.21	-0.19	0.85	-0.28	0.02	-0.32	0.08	-0.04					
66	205	-0.26	-0.07	-0.08	0.02	-0.11	0.35	0.08	-0.21	0.08	0.23	-0.01	0.08	0.14	-0.12
		0.18	-0.21	-0.19	0.85	-0.27	0.02	-0.35	0.08	-0.04					
67	47	-0.29	-0.05	-0.01	0.44	0.15	-0.14	0.18	0.01	0.08	-0.09	-0.03	0.08	0.14	0.21
		0.18	-0.21	0.58	0.85	0.02	-0.03	0.03	0.08	-0.04					
68	21	-0.29	-0.03	-0.01	0.08	0.05	-0.15	0.08	-0.08	0.08	-0.30	-0.04	0.08	0.14	0.23
		0.18	-0.21	0.41	0.85	0.04	0.02	0.06	0.08	0.21					
69	115	-0.29	-0.03	-0.01	0.08	0.05	-0.16	0.08	-0.08	0.05	-0.30	-0.04	0.08	0.14	0.23
		0.18	0.20	0.41	0.85	0.04	0.02	0.06	-0.49	0.21					
70	205	-0.30	-0.03	-0.02	0.13	0.14	-0.15	0.09	0.08	0.08	0.01	0.04	0.08	0.14	0.23
		0.18	-0.21	-0.19	-0.74	-0.05	0.02	0.06	0.08	-0.04					
71	32	-0.31	0.09	-0.03	-0.35	0.15	-0.01	-0.08	0.01	0.08	0.07	-0.09	0.08	0.14	0.14
		0.18	-0.21	-0.19	0.85	0.29	0.04	-0.09	0.08	-0.04					
72	93	-0.32	0.03	-0.04	-0.34	0.17	-0.15	0.08	0.04	0.08	-0.26	-0.02	0.08	0.14	0.23
		0.18	-0.21	0.47	0.85	0.01	0.02	0.06	0.08	-0.04					
73	29	-0.34	0.07	-0.06	-0.62	0.13	-0.16	-0.19	-0.01	0.08	0.07	-0.03	0.08	0.14	0.23
		0.18	-0.21	-0.19	0.85	0.01	-0.29	0.06	0.08	-0.04					
74	13	-0.35	0.09	-0.07	-0.11	0.17	-0.16	0.06	0.04	0.08	-0.07	0.01	0.08	0.14	0.23
		0.18	-0.21	0.51	0.85	-0.03	-0.08	0.06	0.08	-0.04					
75	34	-0.36	0.11	-0.08	0.39	0.17	-0.15	0.10	0.04	0.08	-0.77	-0.04	0.08	0.14	0.23
		0.18	-0.21	-0.19	0.85	0.04	0.02	0.08	0.08	-0.04					
76	98	-0.36	0.11	-0.08	0.81	0.17	-0.14	0.08	0.04	0.12	-0.79	0.01	0.08	0.14	0.22
		0.18	0.18	-0.19	0.85	-0.04	0.02	0.04	0.08	-0.04					
77	14	-0.37	0.13	-0.09	-0.11	0.22	-0.14	0.06	0.10	0.08	-0.22	0.01	0.08	0.14	0.23
		0.18	-0.21	0.57	0.85	-0.04	-0.06	0.06	0.08	-0.04					
78	15	-0.37	0.13	-0.09	-0.33	0.22	-0.16	0.02	0.10	0.08	-0.12	0.01	0.08	0.14	0.23
		0.18	-0.21	0.61	0.85	-0.03	0.02	0.06	0.08	-0.04					
79	96	-0.38	0.14	-0.09	-0.89	0.09	0.42	0.06	-0.05	0.12	0.11	-0.01	-1.10	0.14	0.23
		0.18	0.18	-0.19	0.85	-0.01	-0.33	0.08	0.08	-0.04					
80	202	-0.38	0.15	-0.10	0.87	0.21	0.08	0.08	0.09	0.08	-0.05	-0.06	0.08	0.14	0.08
		0.18	-0.21	-0.19	0.85	0.18	0.02	-0.18	0.04	-0.04					
81	8	-0.38	0.15	-0.10	-0.21	0.28	0.04	0.04	0.07	0.08	0.11	-0.08	0.08	0.14	-0.52
		0.18	-0.21	-0.19	0.85	-0.02	0.02	-0.31	0.08	-0.04					
82	38	-0.39	0.17	-0.10	0.14	0.23	1.67	0.09	0.11	0.00	0.24	0.11	0.08	0.14	-0.08
		0.18	-0.21	-0.19	0.85	-0.12	0.02	0.21	0.08	-0.04					
83	127	-0.39	0.19	-0.11	0.33	0.18	-0.15	0.10	0.04	0.05	-0.14	0.04	0.08	0.14	0.23
		-0.97	0.22	-0.19	0.85	-0.07	0.02	0.06	0.08	0.21					
84	294	-0.39	0.19	-0.11	0.82	0.22	0.26	0.08	0.10	0.08	0.18	-0.06	0.08	0.14	-0.03
		0.18	-0.21	-0.19	0.85	0.19	0.02	-0.28	0.08	-0.04					
85	39	-0.40	0.20	-0.11	0.37	0.19	-0.16	0.10	0.05	0.08	-0.07	0.07	0.08	0.14	0.23
		0.18	-0.21	-0.19	0.85	-0.09	0.02	0.06	0.08	-0.04					
86	40	-0.40	0.21	-0.12	-0.16	0.07	-0.16	0.05	-0.07	-1.30	-0.23	0.17	0.08	0.14	0.23
		0.18	0.54	0.42	0.85	-0.23	0.02	0.06	0.08	-0.04					
87	104	-0.44	0.32	-0.16	0.14	0.21	-0.14	0.09	0.09	0.05	-0.17	-0.08	0.08	0.14	0.22
		0.18	0.20	-0.19	0.85	-0.02	0.02	0.04	-0.49	-0.04					
88	58	-0.44	0.33	-0.16	-0.14	0.30	-0.15	0.05	0.09	0.08	-0.13	0.08	0.08	0.14	0.22
		0.10	-0.21	0.69	0.85	-0.03	0.02	0.05	0.08	-0.04					
89	88	-0.45	0.35	-0.17	0.38	0.23	-0.15	0.10	0.10	0.12	0.18	-0.02	0.08	-1.03	-0.48
		0.18	0.19	-0.19	0.85	0.01	0.02	-0.34	0.08	-0.04					
90	1	-0.46	0.38	-0.18	-0.87	0.15	0.09	0.07	0.02	0.08	0.07	0.01	0.08	0.14	0.07
		0.18	-0.21	-0.19	0.85	-0.04	0.02	-0.17	0.08	-0.04					
91	107	-0.47	0.40	-0.18	-0.12	0.08	-0.14	0.06	-0.13	0.05	-0.02	0.19	0.08	0.14	0.22
		0.18	0.20	-0.19	0.85	-0.19	0.02	0.04	-0.49	-0.04					

92	66	-0.47	0.41	-0.19	0.09	0.17	-0.11	0.06	0.04	0.09	-0.02	-0.00	0.00	0.14	0.20
		0.10	-0.21	0.20	-0.74	0.16	0.02	0.01	0.00	-0.04					
93	10	-0.47	0.42	-0.19	-0.03	0.20	1.06	0.07	0.07	0.09	0.22	-0.00	0.00	0.14	-0.53
		0.10	-0.21	-0.19	0.05	-0.02	0.02	-0.31	0.03	-0.04					
94	110	-0.49	0.47	-0.20	0.51	0.20	-0.16	0.10	0.07	0.03	0.09	0.20	0.00	0.14	-0.56
		0.10	0.20	-0.19	0.05	-0.19	0.22	-0.20	-0.49	-0.04					
95	125	-0.49	0.49	-0.21	-0.22	0.21	-0.16	0.04	0.00	0.05	0.15	-0.01	0.00	0.14	0.23
		-0.07	0.20	-0.19	0.05	-0.01	0.02	0.06	0.06	0.21					
96	95	-0.50	0.51	-0.22	-0.20	0.21	-0.16	0.02	0.00	0.12	0.15	-0.01	-1.10	0.14	0.23
		0.10	0.16	-0.19	0.05	-0.01	0.02	0.06	0.00	0.21					
97	67	-0.50	0.51	-0.22	-0.00	0.20	-0.16	0.06	0.07	0.00	-0.27	-0.06	0.00	0.14	0.23
		0.10	-0.21	-0.19	-0.74	0.00	0.02	0.06	0.06	0.21					
98	111	-0.50	0.53	-0.22	0.43	0.25	1.06	0.10	0.14	0.05	0.21	0.20	0.00	0.14	-0.00
		0.10	0.20	-0.19	0.05	-0.19	0.02	0.21	-0.49	-0.04					
99	203	-0.53	0.63	-0.25	0.31	0.25	-0.16	0.10	0.14	0.00	0.22	-0.05	0.00	0.14	0.23
		0.10	-0.21	-0.19	0.05	0.07	0.22	0.06	0.00	-0.04					
100	45	-0.54	0.68	-0.26	-0.23	0.27	-0.13	0.04	0.16	-0.35	-0.09	0.00	0.00	0.14	0.21
		0.10	0.34	-0.19	0.05	-0.00	0.02	0.03	0.00	-0.04					
101	20	-0.54	0.71	-0.26	0.03	0.28	-0.05	0.00	0.17	-1.21	0.07	-0.00	0.00	0.14	0.23
		0.10	-0.51	0.19	0.05	0.10	0.02	0.06	0.00	-0.04					
102	100	-0.54	0.71	-0.27	0.57	0.27	-0.16	0.10	0.16	0.05	0.11	-0.00	0.00	0.14	0.23
		0.10	0.20	-0.19	0.05	0.21	0.02	0.06	-0.49	-0.04					
103	210	-0.55	0.73	-0.27	0.73	0.28	-0.16	0.10	0.17	0.12	-0.00	-0.06	0.00	0.14	0.23
		0.10	0.16	-0.19	0.05	0.00	0.02	0.06	-0.49	-0.04					
104	71	-0.55	0.75	-0.27	0.61	0.27	-0.03	0.10	0.10	0.12	0.10	-0.00	0.00	-1.03	0.15
		0.10	0.16	-0.19	0.05	0.32	0.02	-0.07	0.00	-0.04					
105	81	-0.55	0.77	-0.28	0.44	0.27	-0.16	0.10	0.17	0.12	0.04	-0.00	0.00	-1.03	0.23
		0.10	0.16	-0.19	0.05	0.34	0.02	0.06	0.00	-0.04					
106	69	-0.56	0.79	-0.28	0.46	0.22	-0.18	0.10	0.10	0.00	-0.30	-3.00	0.00	0.14	0.23
		0.10	-0.21	0.24	-0.74	0.15	-0.43	0.06	0.00	-0.04					
107	78	-0.57	0.82	-0.29	0.36	0.24	1.07	0.10	0.12	0.12	0.24	-0.04	0.00	-1.03	-0.00
		0.10	0.16	-0.19	0.05	0.04	0.02	0.21	0.00	-0.04					
108	122	-0.57	0.87	-0.30	0.14	0.25	-0.16	0.09	0.14	0.05	-1.09	-0.00	0.00	0.14	0.23
		-0.07	0.20	0.16	0.05	0.15	0.02	0.05	0.00	0.17					
109	86	-0.58	0.94	-0.31	0.68	0.25	1.07	0.10	0.15	0.12	0.25	-0.04	0.00	0.14	-0.00
		0.10	0.16	-0.19	0.05	0.04	0.02	0.21	0.00	-0.04					
110	98	-0.58	0.94	-0.31	0.68	0.26	1.07	0.10	0.15	0.12	0.25	-0.04	0.00	0.14	-0.00
		0.10	0.16	-0.19	0.05	0.04	0.02	0.21	0.00	-0.04					
111	11	-0.60	1.02	-0.32	0.19	0.26	-0.16	0.09	0.10	0.00	0.10	-0.00	0.00	0.14	0.23
		0.10	-0.21	-0.19	0.05	0.21	0.02	0.06	0.00	-0.04					
112	200	-0.61	1.10	-0.34	0.14	0.32	0.51	0.00	0.24	0.05	0.10	-0.00	0.00	-1.03	-0.10
		0.10	0.20	-0.19	0.05	0.21	0.02	-0.38	0.00	-0.04					
113	22	-0.62	1.23	-0.35	0.52	0.30	-0.16	0.10	0.20	0.00	-0.02	-0.00	0.00	0.14	0.23
		0.10	-0.21	0.21	0.05	0.10	0.02	0.06	0.00	-0.04					
114	116	-0.62	1.23	-0.35	0.52	0.30	-0.16	0.10	0.20	0.05	-0.02	-0.00	0.00	0.14	0.23
		0.10	0.20	0.21	0.05	0.10	0.02	0.06	-0.49	-0.04					
115	126	-0.63	1.27	-0.36	0.69	0.31	-0.16	0.10	0.22	0.05	0.20	-0.00	0.00	0.14	0.23
		-0.07	0.20	-0.19	0.05	0.32	0.02	0.06	0.00	-0.04					
116	9	-0.63	1.30	-0.36	-0.13	0.20	-0.13	0.06	0.07	0.06	-0.33	0.00	0.00	0.14	0.21
		0.10	-0.21	0.20	0.05	-0.11	0.02	0.02	0.00	-0.04					
117	97	-0.63	1.34	-0.36	-0.04	0.31	-0.16	0.07	0.22	0.12	-0.45	-0.06	-1.10	0.14	0.23
		0.10	0.16	-0.19	0.05	0.00	0.02	0.06	0.00	-0.04					
118	120	-0.63	1.34	-0.38	0.11	0.31	-0.16	0.09	0.22	0.05	-0.45	-0.00	0.00	0.14	0.23
		-0.07	0.20	-0.19	0.05	0.00	0.02	0.06	0.00	-0.04					
119	7	-0.63	1.35	-0.38	0.44	0.34	-0.11	0.10	0.27	0.00	0.13	-0.05	0.00	0.14	0.20
		0.10	-0.21	-0.19	0.05	0.05	0.02	0.00	0.00	-0.04					
120	79	-0.63	1.35	-0.38	0.56	0.32	-0.16	0.10	0.23	0.12	0.07	-0.00	0.00	-1.03	0.07
		0.10	0.16	-0.19	0.05	0.15	0.02	-0.17	0.00	-0.04					
121	58	-0.64	1.44	-0.37	0.22	0.32	0.02	0.09	0.23	0.00	0.21	-0.00	0.00	0.14	0.12
		0.10	-0.21	0.53	0.05	0.21	0.02	-0.12	0.00	-0.04					
122	35	-0.65	1.63	-0.39	0.34	0.31	-0.16	0.10	0.22	0.00	0.02	-0.00	0.00	0.14	0.23
		0.10	-0.21	-0.19	0.05	0.32	0.02	0.06	0.00	-0.04					

123	117	-0.05	1.03	-0.39	0.01	0.34	-0.16	0.10	0.25	0.05	0.05	-0.00	0.00	0.14	0.23
		0.10	0.20	-0.19	0.05	0.20	0.02	0.06	-0.49	-0.04					
124	0	-0.06	1.05	-0.39	0.00	0.31	-0.16	0.10	0.22	0.00	0.23	-0.00	0.00	0.14	0.23
		0.10	-0.21	-0.19	0.05	0.21	0.02	0.06	0.00	-0.04					
125	112	-0.06	1.05	-0.39	0.11	0.33	0.75	0.00	0.25	0.05	0.20	-0.00	0.00	0.14	-2.34
		0.10	0.20	-0.19	0.05	0.32	0.02	-0.39	-0.49	-0.04					
126	74	-0.06	1.70	-0.39	1.14	0.33	-0.16	0.10	0.24	0.12	0.07	-0.00	0.00	-1.03	-0.00
		0.10	0.10	-0.19	0.05	0.23	0.02	0.21	0.06	-0.04					
127	10	-0.06	1.70	-0.40	0.36	0.34	-0.16	0.10	0.25	0.00	0.05	-0.00	0.00	0.14	0.23
		0.10	-0.21	-0.19	0.05	0.32	0.02	0.06	0.00	-0.04					
128	70	-0.06	1.76	-0.40	0.34	0.34	-0.16	0.10	0.25	0.00	-0.16	-0.10	0.00	0.14	0.23
		0.10	-0.21	0.52	-0.74	0.41	-0.17	0.06	0.00	-0.04					
129	90	-0.07	1.00	-0.41	-0.04	0.31	-0.16	0.07	0.22	0.12	0.07	-0.00	-1.10	0.14	0.10
		0.10	0.10	-0.19	0.05	0.20	0.02	-0.01	0.00	0.21					
130	00	-0.00	2.30	-0.43	0.70	0.35	-0.16	0.10	0.27	0.12	0.04	-0.00	-1.10	0.14	0.23
		0.10	0.10	-0.19	0.05	0.20	0.02	0.00	0.00	-0.04					
131	70	-0.00	2.54	-0.43	1.13	0.34	-0.10	0.10	0.27	0.12	-0.00	-0.00	0.00	-1.03	-0.00
		0.10	0.10	-0.19	0.05	0.10	0.02	0.21	0.00	-0.04					

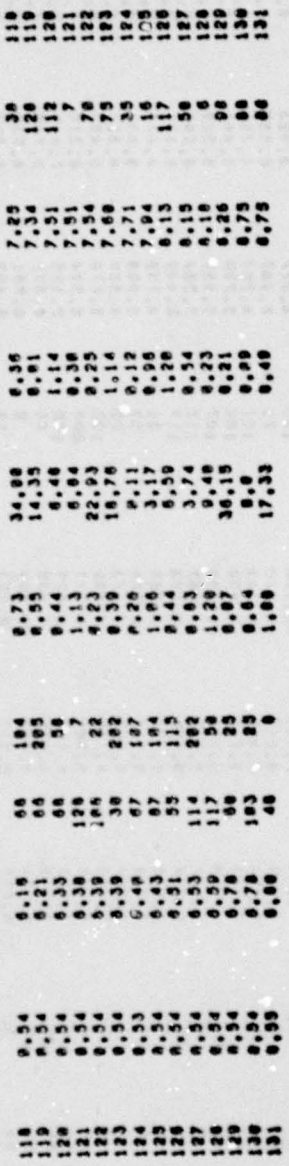
LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

D&M MODEL RUN28 DEP VAR 11 LMTSMA RESIDUAL ROOT MEAN SQUARE OF FITTED EQUATION: 0.48

STANDARD DEVIATION ESTIMATED FROM RESIDUALS OF NEIGHBORING OBSERVATIONS (OBSERVATIONS 1 TO 4 APART IN FITTED Y ORDER).

NO.	CUMULATIVE STD DEV	ORDERED BY WSSD: WSSD	OBSV.	OBSV.	DEL RESIDUALS	ORDERED BY FITTED Y: WSSD	DEL RESIDUALS	FITTED Y	OBSV.	SEQ.
1	0.00	0.0	88	86	0.00	00.11	0.01	3.85	26	1
2	0.25	0.0	85	84	0.42	07.36	0.02	3.87	77	2
3	0.25	0.4	92	91	0.24	20.29	0.39	3.89	61	3
4	0.34	0.00	119	121	0.64	7.06	0.71	3.92	103	4
5	0.35	0.01	100	109	0.36	24.92	0.76	3.94	60	5
6	0.31	0.11	35	16	0.12	20.12	0.69	4.00	89	6
7	0.34	0.14	211	110	0.53	11.43	0.14	4.21	25	7
8	0.34	0.16	13	14	0.33	10.35	0.51	4.22	84	8
9	0.33	0.31	81	71	0.32	0.0	0.24	4.26	92	9
10	0.34	0.32	15	14	0.37	11.00	0.13	4.20	91	10
11	0.37	0.37	15	13	0.70	13.13	0.56	4.31	119	11
12	0.34	0.38	54	55	0.04	16.00	0.54	4.32	72	12
13	0.37	0.46	66	64	0.70	21.35	1.67	4.35	94	13
14	0.36	0.46	66	65	0.27	23.00	1.21	4.35	83	14
15	0.35	0.50	50	53	0.15	17.72	0.30	4.36	121	15
16	0.42	0.71	07	59	1.37	69.47	0.41	4.37	27	16
17	0.41	0.72	16	0	0.30	00.45	0.10	4.42	73	17
18	0.40	0.75	35	0	0.10	23.70	0.29	4.00	51	18
19	0.44	0.00	7	35	1.20	12.17	0.34	4.40	124	19
20	0.42	0.00	13	21	0.13	14.33	0.44	4.01	02	20
21	0.41	1.05	12	32	0.06	00.50	0.70	4.02	20	21
22	0.40	1.07	21	14	0.20	30.00	1.10	4.07	207	22
23	0.43	1.00	11	203	1.17	1.50	0.10	4.72	41	23
24	0.47	1.21	7	10	1.31	7.35	0.35	4.73	17	24
25	0.45	1.34	34	00	0.00	14.00	0.05	4.73	37	25
26	0.45	1.44	00	200	0.35	17.30	0.72	4.74	57	26
27	0.44	1.50	41	17	0.10	10.00	0.00	4.70	40	27
28	0.45	1.75	02	04	0.73	0.55	0.20	4.03	00	28
29	0.40	1.75	01	04	0.07	4.23	0.14	4.05	0	29
30	0.47	1.00	15	21	0.57	2.02	0.32	4.00	201	30
31	0.45	1.04	43	02	0.00	4.24	0.05	4.02	2	31
32	0.45	1.05	70	71	0.43	10.20	0.70	4.05	100	32
33	0.45	2.00	33	202	0.51	10.07	0.43	4.00	123	33
34	0.40	2.14	01	70	0.75	14.02	0.20	5.00	100	34
35	0.45	2.10	110	22	0.01	0.53	0.10	5.02	120	35
36	0.44	2.24	50	33	0.12	0.40	0.27	5.03	00	36
37	0.45	2.20	52	40	0.01	0.0	0.42	5.04	05	37
30	0.47	2.30	30	54	1.12	7.22	1.24	5.04	04	30
30	0.47	2.40	117	0	0.00	0.00	0.10	5.05	205	30
40	0.40	2.51	05	200	0.03	70.00	0.01	5.12	200	40
41	0.40	2.51	04	200	1.05	20.03	0.03	5.14	101	41
42	0.40	2.57	50	47	0.33	01.00	0.05	5.10	42	42
43	0.40	2.57	200	07	0.21	13.24	0.50	5.10	07	43
44	0.40	2.50	00	00	1.11	20.04	0.23	5.24	00	44
45	0.40	2.02	201	2	0.32	23.73	0.47	5.20	02	45
46	0.40	2.01	203	100	0.00	10.40	0.03	5.33	127	46
47	0.40	2.04	204	30	0.35	10.00	0.40	5.30	100	47
40	0.50	2.01	07	114	1.13	21.51	0.54	5.43	05	40
40	0.50	2.02	114	30	0.43	23.23	0.22	5.43	30	40
50	0.50	3.03	35	50	0.30	53.03	0.70	5.45	40	50
51	0.40	3.07	30	21	0.22	21.21	0.02	5.40	102	51
52	0.50	3.00	50	07	0.70	5.05	0.10	5.40	43	52
53	0.51	3.15	115	13	1.03	21.02	0.50	5.40	105	53
54	0.51	3.15	35	117	0.04	43.21	0.44	5.47	122	54
55	0.52	3.17	10	117	0.00	20.07	0.51	5.40	52	55
56	0.52	3.22	11	100	0.40	11.41	1.41	5.50	34	56

57	0.52	3.27	49	12	0.19	21.94	0.95	5.51	49	57
58	0.51	3.28	39	13	0.18	13.16	0.76	5.52	26	58
59	0.50	3.34	22	7	0.24	6.82	1.38	5.52	12	59
60	0.50	3.35	16	58	0.24	9.41	1.43	5.54	90	60
61	0.49	3.36	96	25	0.14	5.84	0.86	5.55	5	61
62	0.49	3.36	59	114	0.44	14.32	0.59	5.57	32	62
63	0.50	3.40	55	85	0.77	23.85	0.92	5.57	93	63
64	0.49	3.46	206	79	0.26	122.82	0.85	5.58	125	64
65	0.50	3.47	58	59	0.79	86.43	0.13	5.59	16	65
66	0.50	3.48	210	203	0.41	11.26	0.89	5.60	211	66
67	0.51	3.63	87	30	1.56	15.57	0.74	5.60	209	67
68	0.50	3.64	49	5	0.00	48.16	0.16	5.62	110	68
69	0.50	3.64	17	48	0.31	24.89	0.23	5.62	78	69
70	0.50	3.66	53	114	0.50	48.26	0.24	5.65	110	70
71	0.50	3.71	123	128	0.17	89.24	0.21	5.69	44	71
72	0.50	3.74	50	6	0.54	13.76	0.19	5.69	97	72
73	0.50	3.88	59	202	0.39	12.62	1.41	5.70	89	73
74	0.50	3.94	210	1	0.76	7.71	1.49	5.71	127	74
75	0.50	3.95	115	15	0.33	4.48	1.19	5.73	1	75
76	0.50	4.03	1	53	0.98	6.33	0.44	5.76	68	76
77	0.51	4.07	53	59	0.94	8.58	0.19	5.79	58	77
78	0.50	4.14	26	183	0.18	4.55	0.83	5.83	53	78
79	0.50	4.21	59	38	0.81	6.43	1.86	5.84	87	79
80	0.49	4.22	8	201	0.14	5.81	0.58	5.84	184	80
81	0.49	4.23	188	116	0.22	3.36	0.44	5.84	59	81
82	0.49	4.24	2	188	0.86	2.92	0.43	5.85	114	82
83	0.49	4.25	37	48	0.66	6.89	0.11	5.86	38	83
84	0.51	4.26	202	45	1.77	2.88	0.51	5.88	33	84
85	0.51	4.33	2	189	0.51	13.62	0.92	5.90	202	85
86	0.52	4.40	1	68	1.19	38.68	0.68	5.94	126	86
87	0.51	4.44	12	5	0.13	14.92	0.26	5.97	54	87
88	0.51	4.45	184	33	0.38	16.25	0.29	6.10	45	88
89	0.52	4.59	185	49	1.86	19.89	1.93	6.10	55	89
90	0.52	4.55	53	87	0.63	7.26	1.47	6.12	204	90
91	0.52	4.61	62	186	0.36	8.39	1.21	6.14	115	91
92	0.52	4.72	48	201	0.86	9.29	0.89	6.21	85	92
93	0.52	4.79	33	54	1.81	5.86	0.79	6.21	39	93
94	0.52	4.85	68	53	0.29	9.37	0.78	6.23	15	94
95	0.52	4.88	208	81	0.46	8.99	0.13	6.24	13	95
96	0.52	5.01	184	59	0.58	14.84	0.12	6.25	21	96
97	0.52	5.05	43	185	0.18	13.26	0.88	6.28	18	97
98	0.52	5.08	39	15	0.79	19.22	0.85	6.30	14	98
99	0.52	5.20	36	43	0.38	4.88	0.48	6.32	208	99
100	0.52	5.23	115	39	1.12	11.64	0.29	6.43	81	100
101	0.52	5.24	1	58	0.75	27.88	0.29	6.44	9	101
102	0.53	5.25	98	32	1.36	48.89	0.17	6.47	19	102
103	0.54	5.27	78	18	1.81	1.85	0.43	6.55	79	103
104	0.53	5.31	184	114	0.97	13.66	0.49	6.56	71	104
105	0.54	5.33	78	35	0.89	27.11	0.14	6.68	56	105
106	0.54	5.38	45	204	1.32	27.76	0.47	6.82	46	106
107	0.54	5.47	9	56	0.52	32.88	0.18	6.87	47	107
108	0.54	5.48	114	33	0.32	15.29	0.49	6.93	74	108
109	0.55	5.57	204	15	1.14	3.94	0.76	6.97	210	109
110	0.54	5.62	53	184	0.44	1.88	1.17	6.98	11	110
111	0.54	5.66	8	2	0.46	15.15	0.88	6.99	203	111
112	0.54	5.78	54	115	0.48	38.24	2.51	6.99	111	112
113	0.54	5.94	5	32	0.98	15.63	0.39	7.08	99	113
114	0.55	5.95	1	87	1.53	4.23	0.22	7.84	188	114
115	0.54	5.99	47	203	0.91	32.43	0.84	7.87	116	115
116	0.54	6.08	205	208	0.19	31.65	0.85	7.11	78	116
117	0.54	6.09	38	33	0.11	38.84	0.53	7.18	22	117



LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

D&N MODEL RUN29 DEP VAR IS LMT8M4
RESIDUAL ROOT MEAN SQUARE 0.48268129
RESIDUAL MEAN SQUARE 0.23298123
RESIDUAL SUM OF SQUARES 24.92899135
TOTAL SUM OF SQUARES 182.18723384
MULT. CORREL. COEF. SQUARED .8630

ORDERED BY COMPUTER INPUT

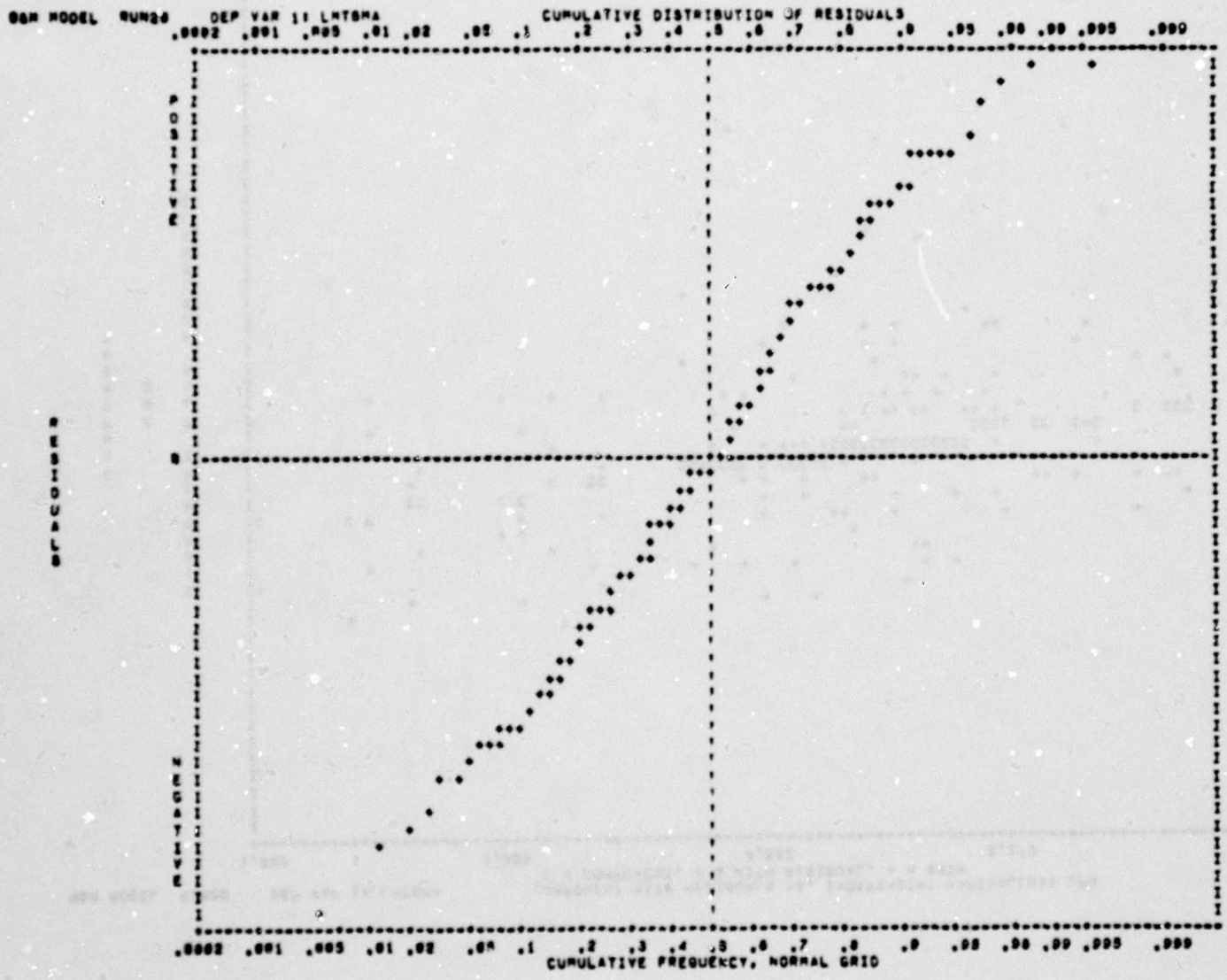
IDENT.	OBSV.	MSS DISTANCE	OBS. Y	FITTED Y	RESIDUAL
71B20	1	3.	5.896	5.732	-0.837
71L80	2	5.	5.981	4.923	0.158
71PC0	5	3.	6.166	5.546	0.620
71710	6	18.	7.832	8.181	-0.349
724G0	7	13.	8.172	7.598	0.664
71G50	8	3.	4.546	4.851	-0.305
71FA0	9	11.	6.819	6.435	0.383
71F80	10	9.	6.358	6.283	0.075
71CA0	11	8.	7.669	6.984	0.685
710A0	12	2.	6.009	5.524	0.485
51EA0	13	3.	6.064	6.237	-0.173
92AA0	14	3.	6.453	6.300	0.153
52A80	15	4.	6.757	6.234	0.523
638D0	16	19.	7.293	7.941	-0.648
71AE0	17	8.	5.110	4.726	0.384
74JA0	18	92.	5.569	3.588	-0.818
74JC0	19	7.	6.569	6.471	0.098
52GA1	20	12.	5.242	5.517	-0.275
71Z40	21	3.	6.199	6.245	-0.047
71Z90	22	13.	7.598	7.176	0.421
73EP0	25	9.	4.924	4.212	-0.288
73MA0	26	22.	4.299	3.850	0.449
73MC0	27	4.	4.329	4.367	-0.037
73090	29	4.	4.784	4.622	0.062
738C0	30	4.	5.198	5.858	-0.678
73KE0	32	2.	6.111	5.568	0.543
73KF0	33	2.	5.344	5.901	-0.557
73KK0	34	5.	4.765	5.501	-0.736
75930	35	16.	7.177	7.708	-0.931
74B0P	36	8.	4.840	5.429	-0.589
74BF0	37	5.	4.765	4.728	0.037
74810	38	18.	7.143	7.249	-0.106
76A10	39	8.	5.945	6.215	-0.270
78GA0	40	12.	5.884	5.448	-0.564
74FF0	41	14.	5.287	4.717	0.570
74FAP	42	56.	4.919	5.198	-2.278
74FH0	43	6.	5.177	5.464	-0.287
74FUP	44	39.	5.524	5.687	-0.163
73CRP	45	6.	6.828	6.128	0.700
73CG0	46	19.	6.818	6.817	0.001
858M0	47	3.	6.394	6.867	-0.473
74FJ0	48	4.	5.469	4.775	0.692
74FJA	49	4.	6.185	5.507	0.677
74FK0	50	14.	7.258	8.147	-0.889
74FQA	51	23.	4.745	4.476	0.269
74MA0	52	11.	5.264	5.493	-0.229
74RC0	53	0.	6.796	5.533	0.263
74CA0	54	4.	6.428	5.968	0.452
74C80	55	5.	6.513	6.100	0.413
74CC0	56	4.	6.543	6.683	-0.140
74FA1	57	18.	4.715	4.743	-0.028
74E8A	58	3.	5.896	5.785	0.110
73PH0	59	2.	5.166	5.843	-0.677

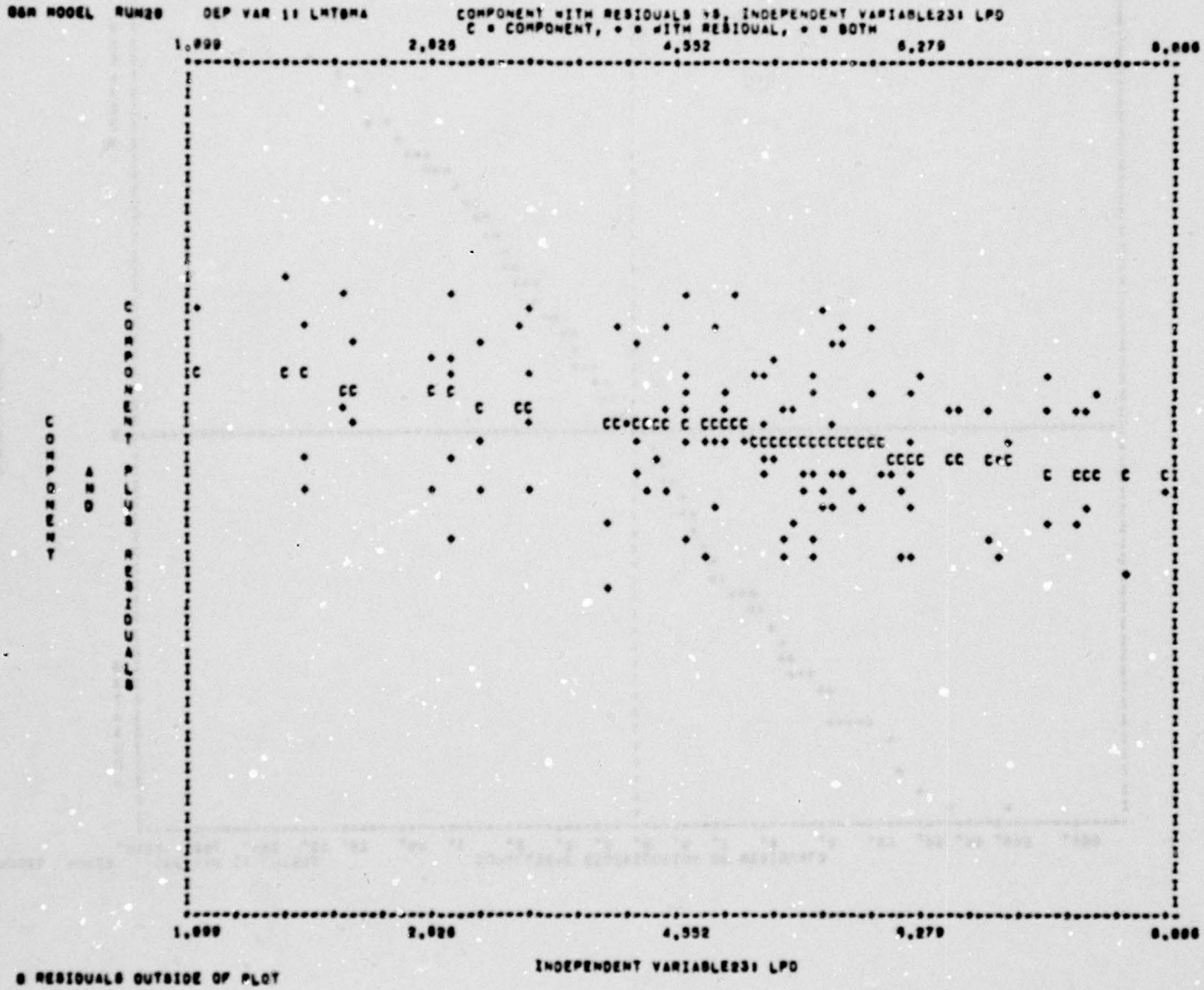
ORDERED BY RESIDUALS

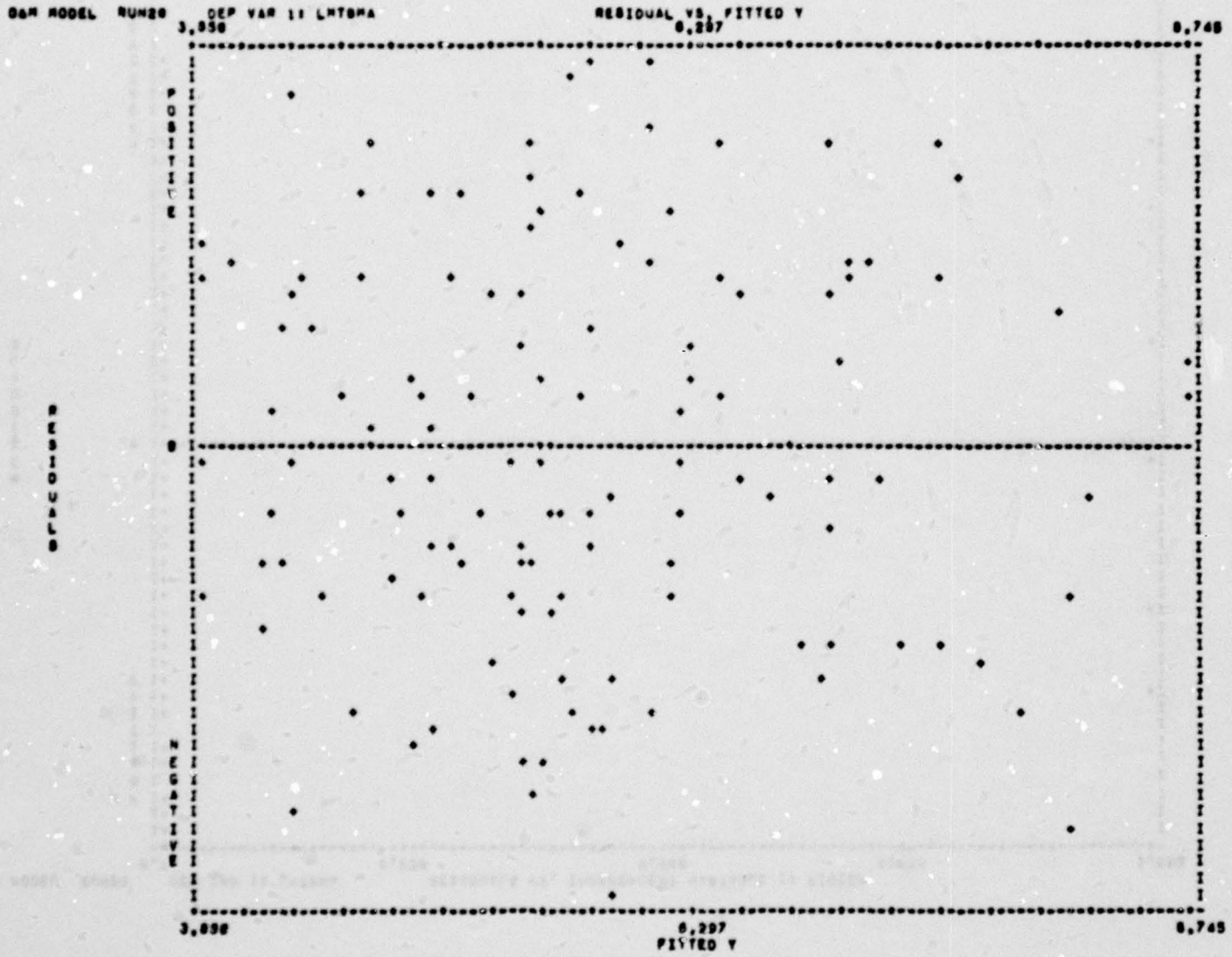
OBSV.	OBS. Y	FITTED Y	ORDERED RESID.	SEQ
87	6.738	5.848	0.891	1
115	6.989	6.135	0.854	2
127	6.562	5.711	0.851	3
94	5.153	4.351	0.802	4
45	6.898	6.189	0.708	5
48	5.468	4.775	0.692	6
11	7.669	6.984	0.685	7
49	6.185	5.507	0.677	8
81	7.103	6.433	0.670	9
7	8.172	7.508	0.664	10
5	5.166	5.548	0.620	11
75	8.217	7.604	0.613	12
67	5.760	5.183	0.577	13
41	5.287	4.717	0.570	14
205	5.812	5.454	0.358	15
88	6.314	5.761	0.552	16
32	6.111	5.568	0.543	17
15	6.757	6.234	0.523	18
12	6.009	5.524	0.485	19
54	6.428	5.968	0.452	20
26	4.299	3.850	0.449	21
22	7.598	7.176	0.421	22
55	6.513	6.100	0.413	23
116	7.477	7.066	0.410	24
80	4.498	4.085	0.404	25
17	5.110	4.726	0.384	26
9	6.819	6.435	0.383	27
78	7.485	7.111	0.374	28
73	6.795	6.425	0.370	29
208	5.487	5.120	0.367	30
78	7.898	7.538	0.360	31
103	4.277	3.923	0.354	32
71	6.907	6.557	0.350	33
121	4.784	4.461	0.343	34
102	5.799	5.463	0.336	35
109	5.659	5.339	0.321	36
111	7.304	6.990	0.314	37
117	8.442	8.131	0.311	38
51	4.745	4.476	0.269	39
53	6.096	5.833	0.263	40
72	4.588	4.328	0.260	41
122	5.679	5.472	0.208	42
209	6.524	6.318	0.206	43
198	7.235	7.042	0.193	44
88	8.927	8.745	0.181	45
2	5.081	4.923	0.158	46
14	6.453	6.329	0.153	47
211	5.726	5.596	0.130	48
58	5.896	5.785	0.110	49
19	6.569	6.471	0.098	50
88	8.836	8.745	0.091	51
123	5.073	4.990	0.083	52
96	5.319	5.237	0.082	53

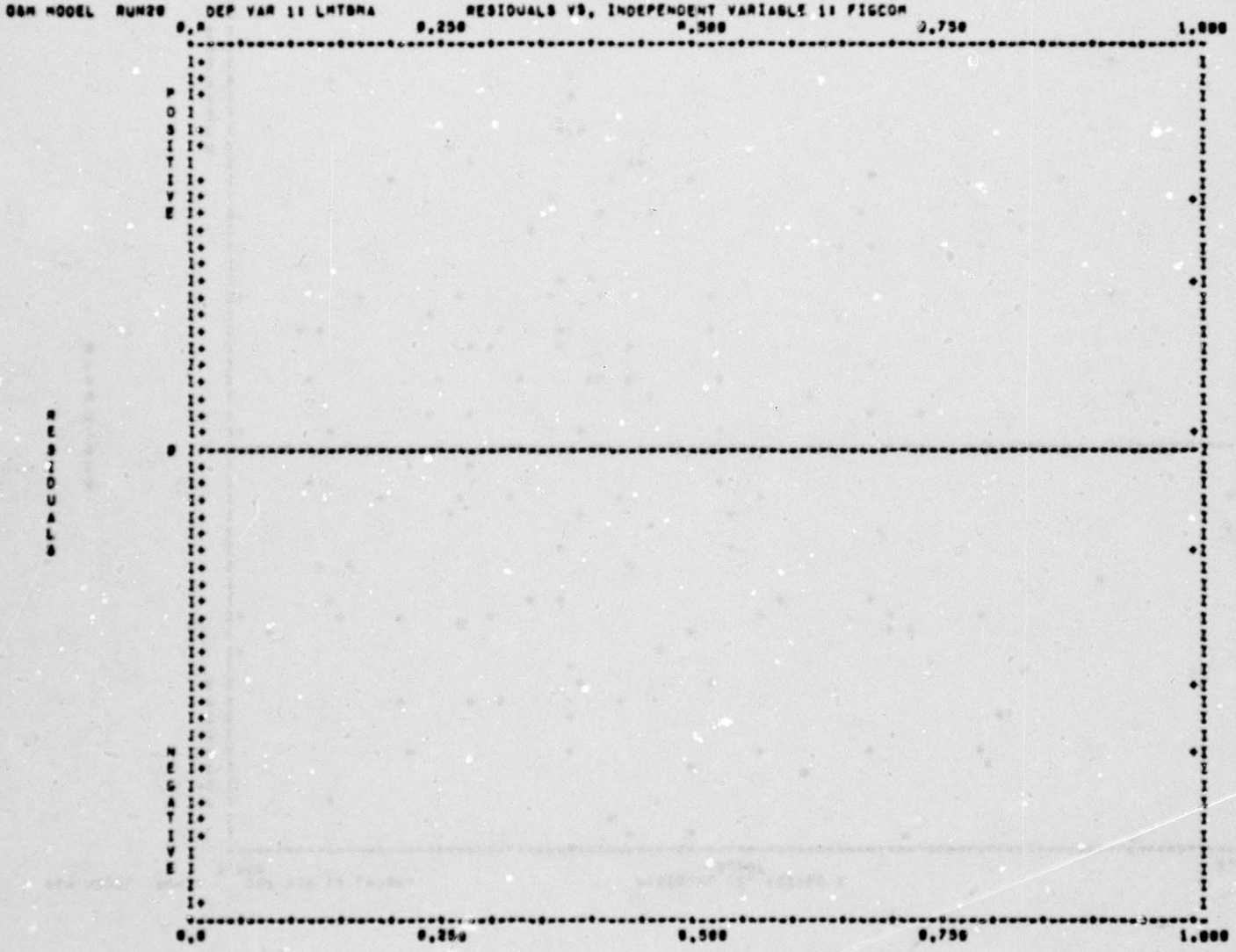


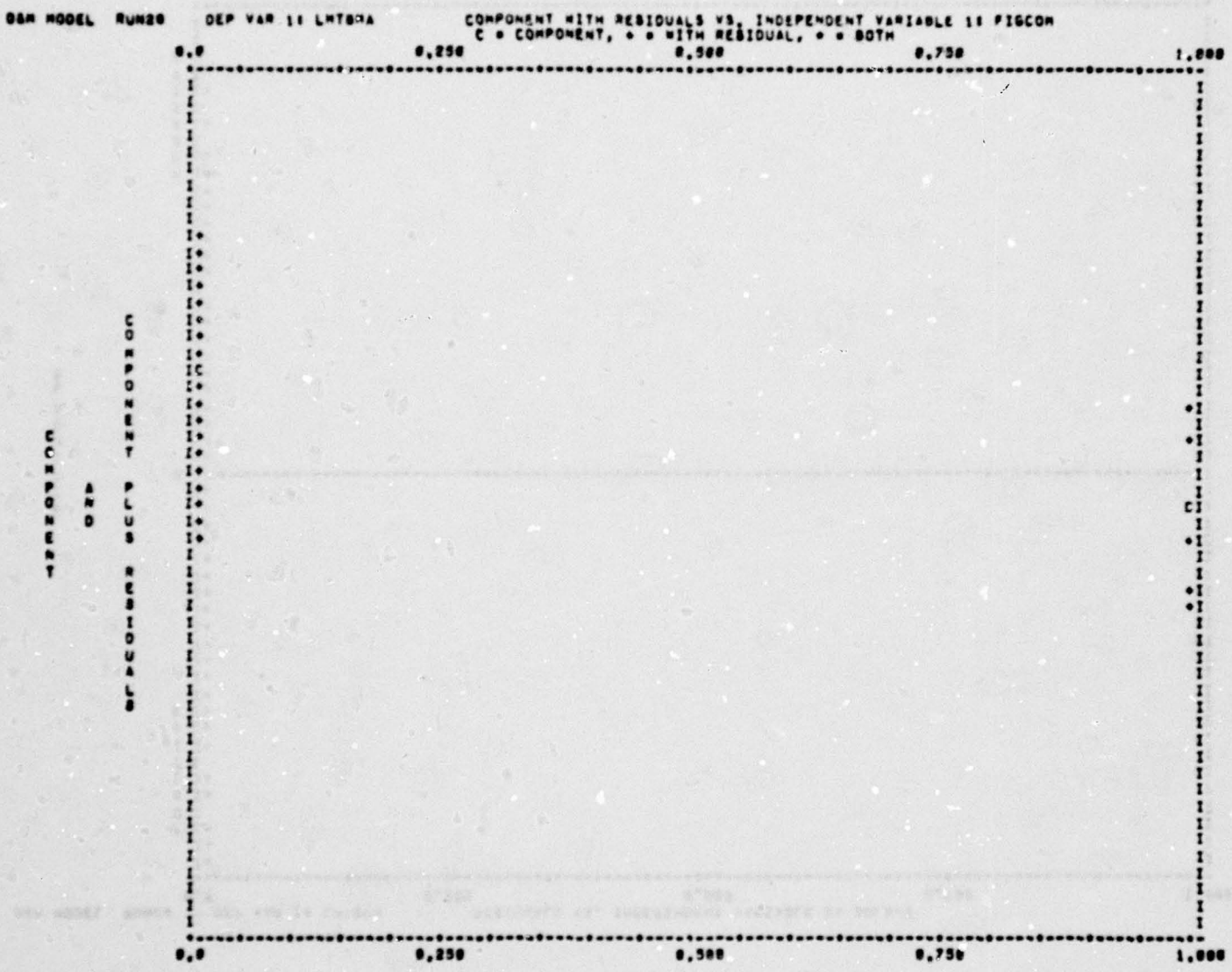
01440	125	0.	5.519	5.577	-0.057	36	4.840	5.429	-0.589	117
01460	126	10.	5.788	5.935	-0.147	284	5.586	6.121	-0.615	118
02440	127	7.	6.562	5.711	0.851	287	4.854	4.673	-0.819	119
04211	128	17.	6.878	7.340	-0.462	1	5.906	5.732	-0.837	120
21940	201	2.	4.725	4.888	-0.163	10	7.293	7.941	-0.648	121
24BC0	202	2.	4.848	5.985	-1.954	3P	5.199	5.859	-0.670	122
2C9E0	203	9.	6.506	5.989	-0.483	59	5.166	5.843	-0.677	123
24BG0	204	3.	5.506	6.121	-0.615	64	4.359	5.043	-0.683	124
24BH0	205	3.	5.612	5.954	0.558	1PP	4.243	4.950	-0.707	125
85CA0	206	4.	5.487	5.120	0.367	34	4.765	5.501	-0.736	126
73JC0	207	47.	4.854	4.673	-0.819	289	4.847	5.603	-0.756	127
73JF0	208	16.	6.524	6.318	0.206	9P	4.728	5.543	-0.815	128
71CA0	209	9.	4.847	5.603	-0.756	83	3.481	4.352	-0.871	129
71G40	210	0.	0.000	0.971	-0.076	59	7.258	8.147	-0.889	130
85AA0	211	0.	9.720	9.596	0.130	2PE	4.840	0.005	-1.004	131

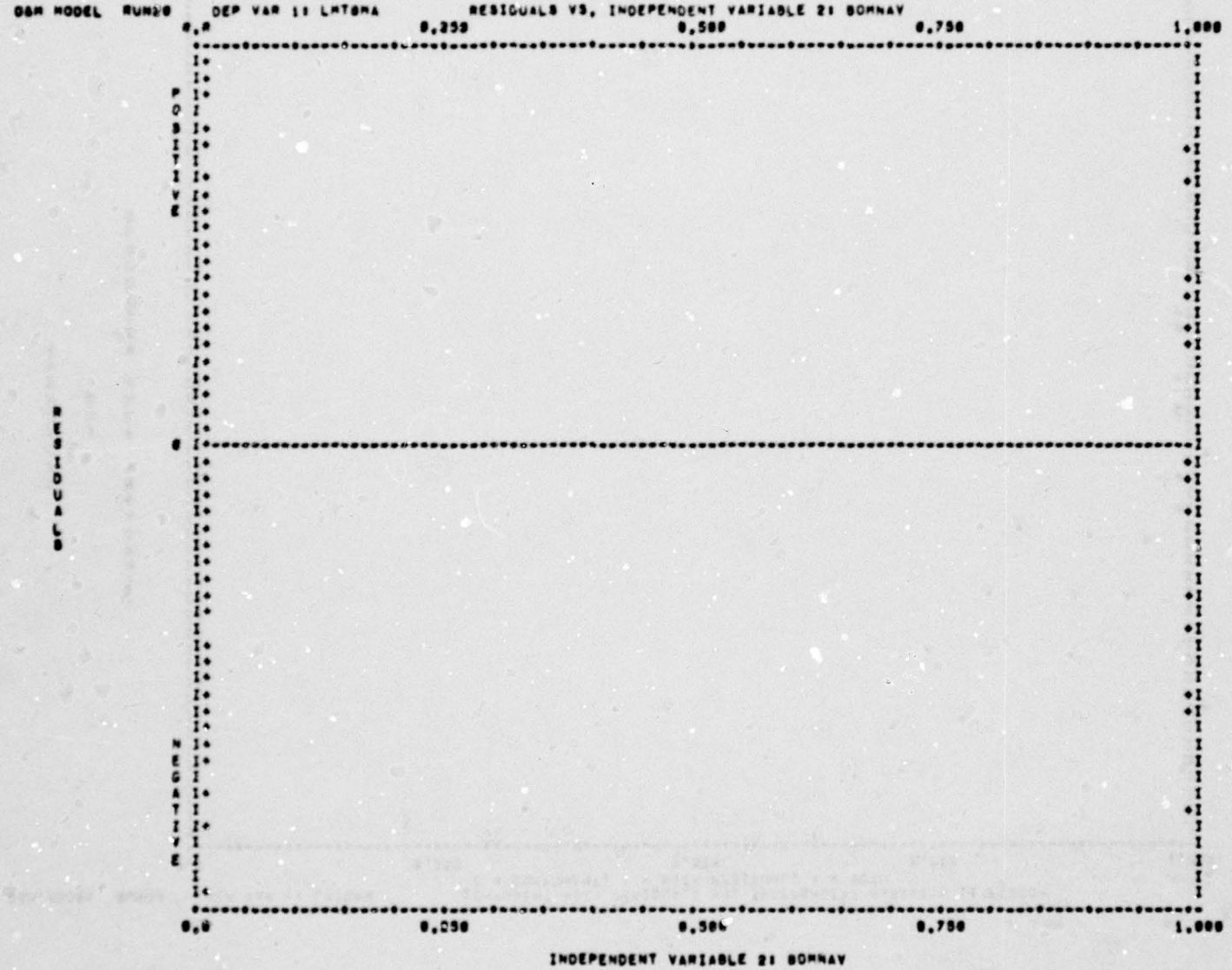

B&H MODEL RUN26
DEP VAR IS LNTSMA
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID

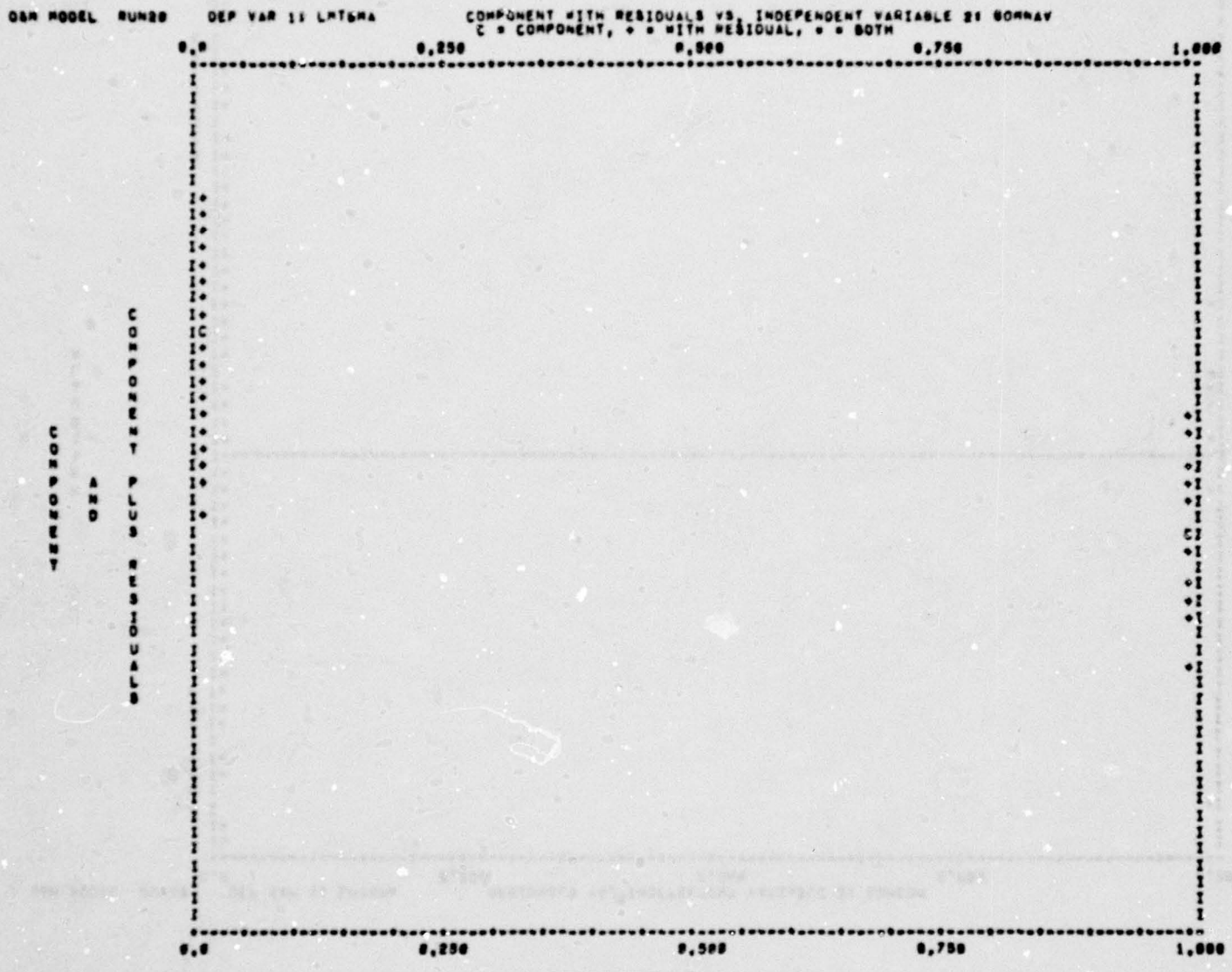

GGR MODEL RUN20 DEP VAR 1: LMTBMA
COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE23: LPD
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
1.899
2.826
4.552
6.279
8.006
COMPONENT PLUS RESIDUALS
AND
COMPONENT
INDEPENDENT VARIABLE23: LPD
0 RESIDUALS OUTSIDE OF PLOT

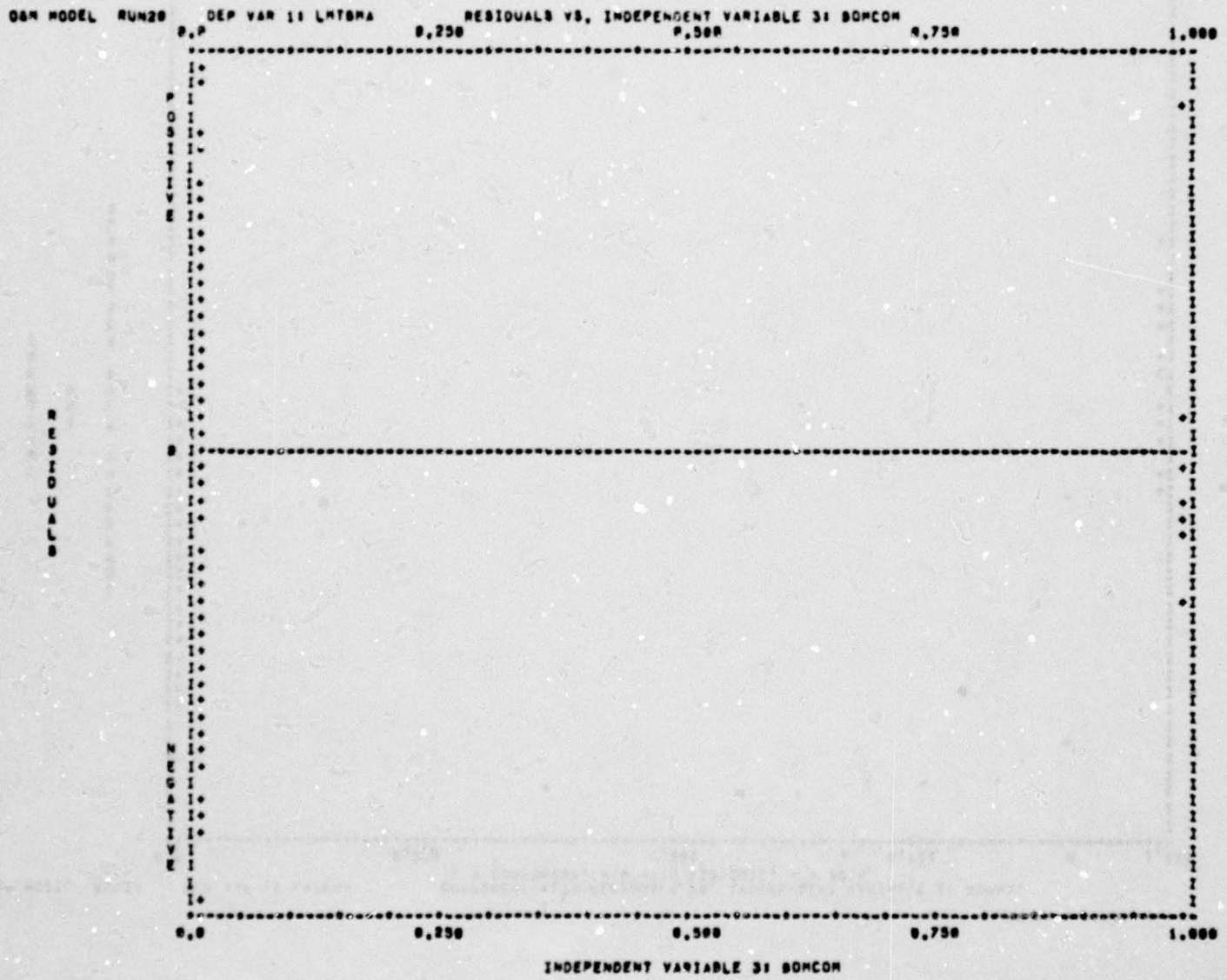

G&M MODEL RUN20 DEP VAR 1: LNTSMA
RESIDUAL VS. FITTED Y
3.838
8.297
8.745
POSITIVE
0
NEGATIVE
RESIDUALS
3.838
8.297
8.745
FITTED Y

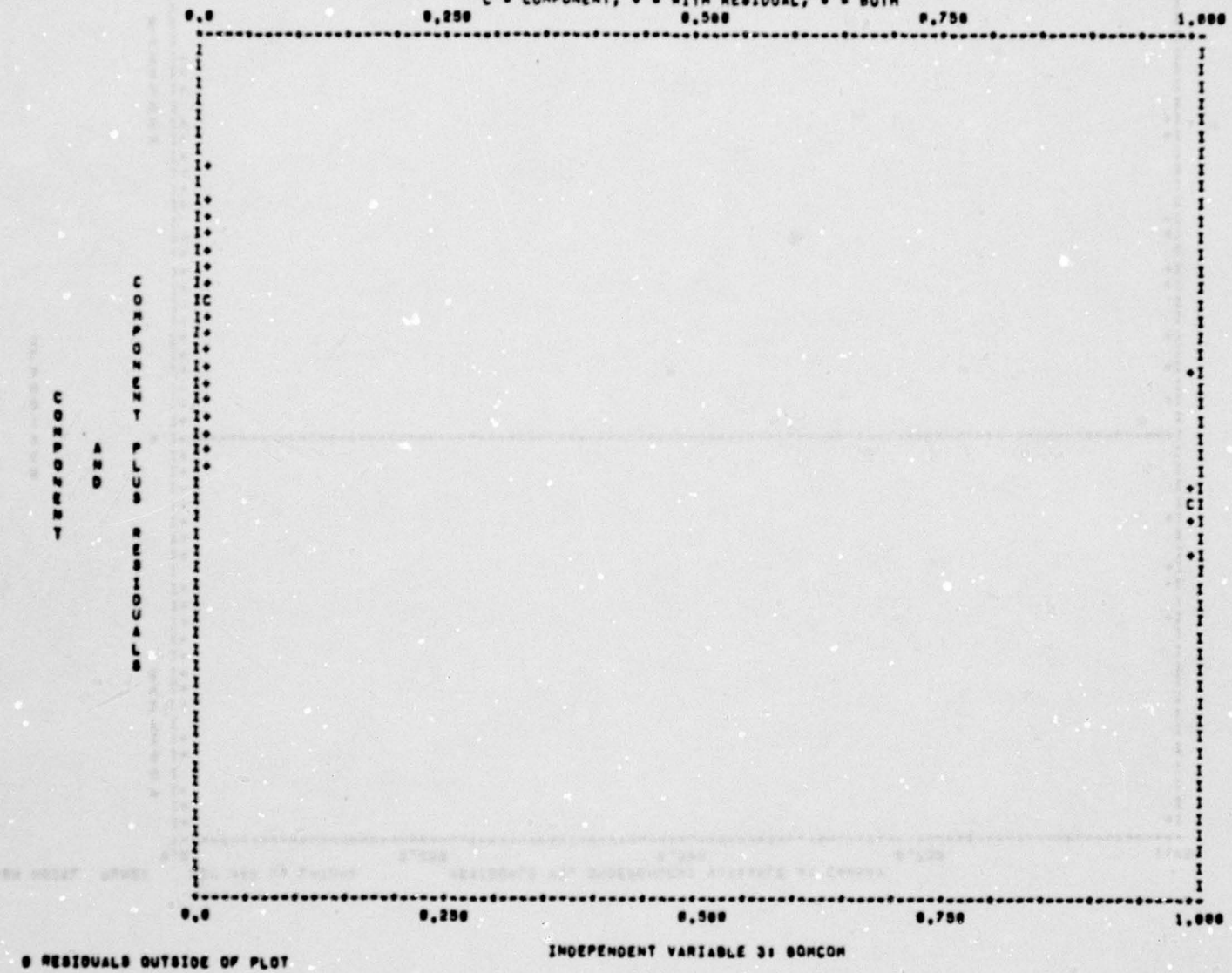

G&M MODEL RUN20 DEP VAR IS LMTBRA RESIDUALS VS. INDEPENDENT VARIABLE IS FIGCOM
0.0
0.250
0.500
0.750
1.000
POSITIVE
RESIDUALS
0
NEGATIVE
INDEPENDENT VARIABLE IS FIGCOM

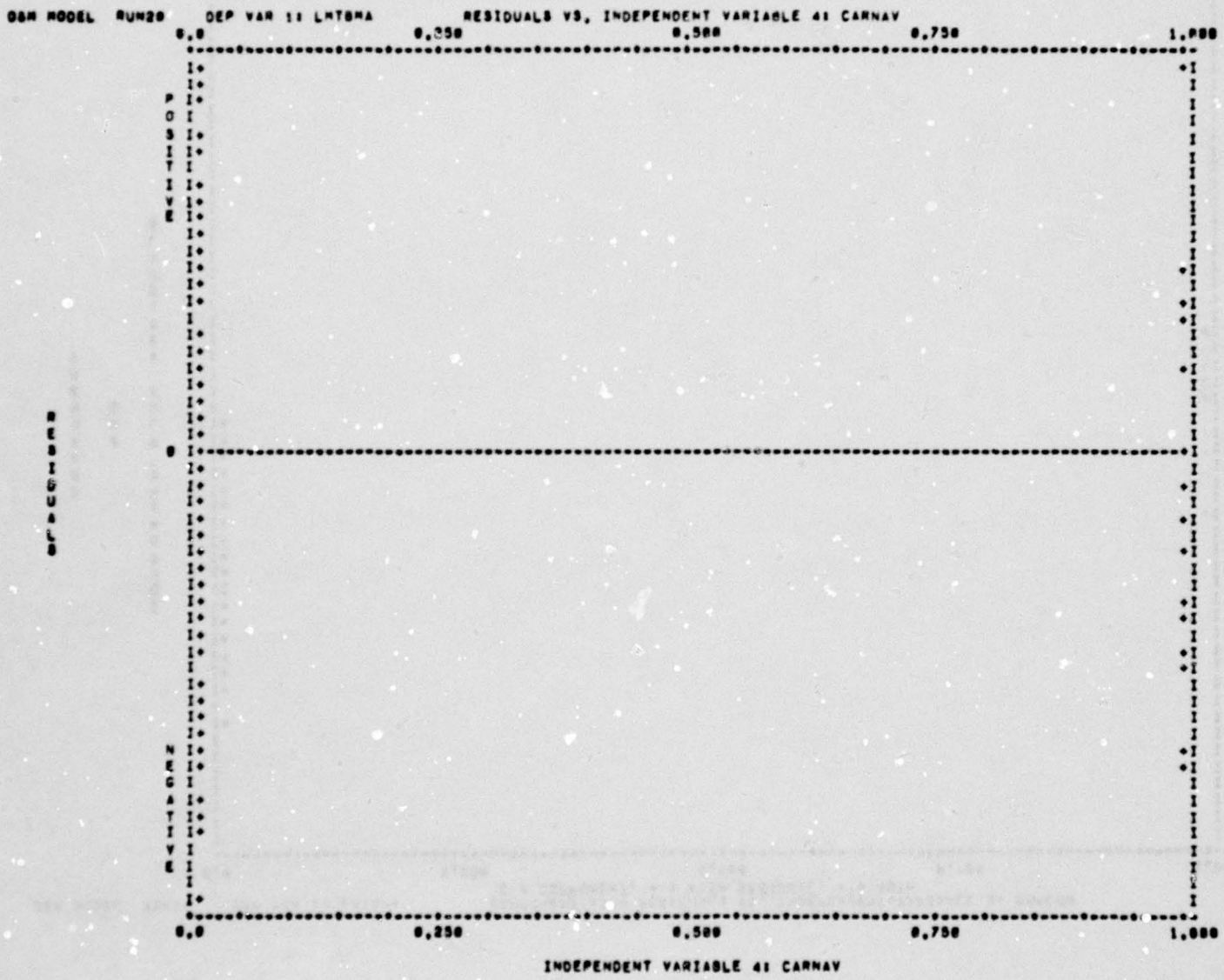

B&M MODEL RUN20 DEP VAR IS LMTBDA COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE IS FIGCON
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
0.0
0.250
0.500
0.750
1.000
COMPONENT AND COMPONENT PLUS RESIDUALS
0 RESIDUALS OUTSIDE OF PLOT
INDEPENDENT VARIABLE IS FIGCON

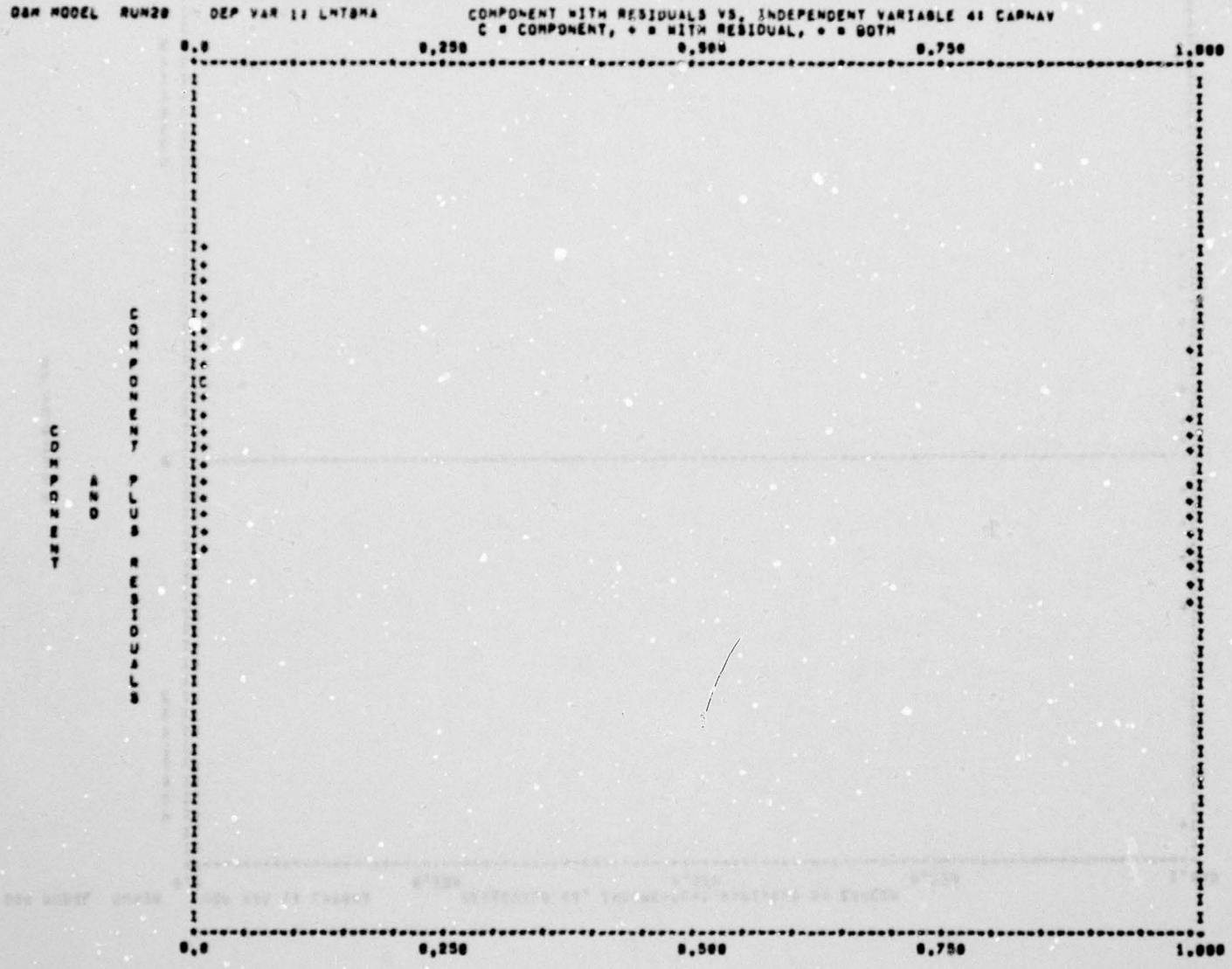

O&M MODEL RUN20 DEP VAR 11 LMTBMA RESIDUALS VS, INDEPENDENT VARIABLE 21 BOMNAV
0.0
0.250
0.500
0.750
1.000
POSITIVE
RESIDUALS
0
NEGATIVE
0.0
0.250
0.504
0.750
1.000
INDEPENDENT VARIABLE 21 BOMNAV

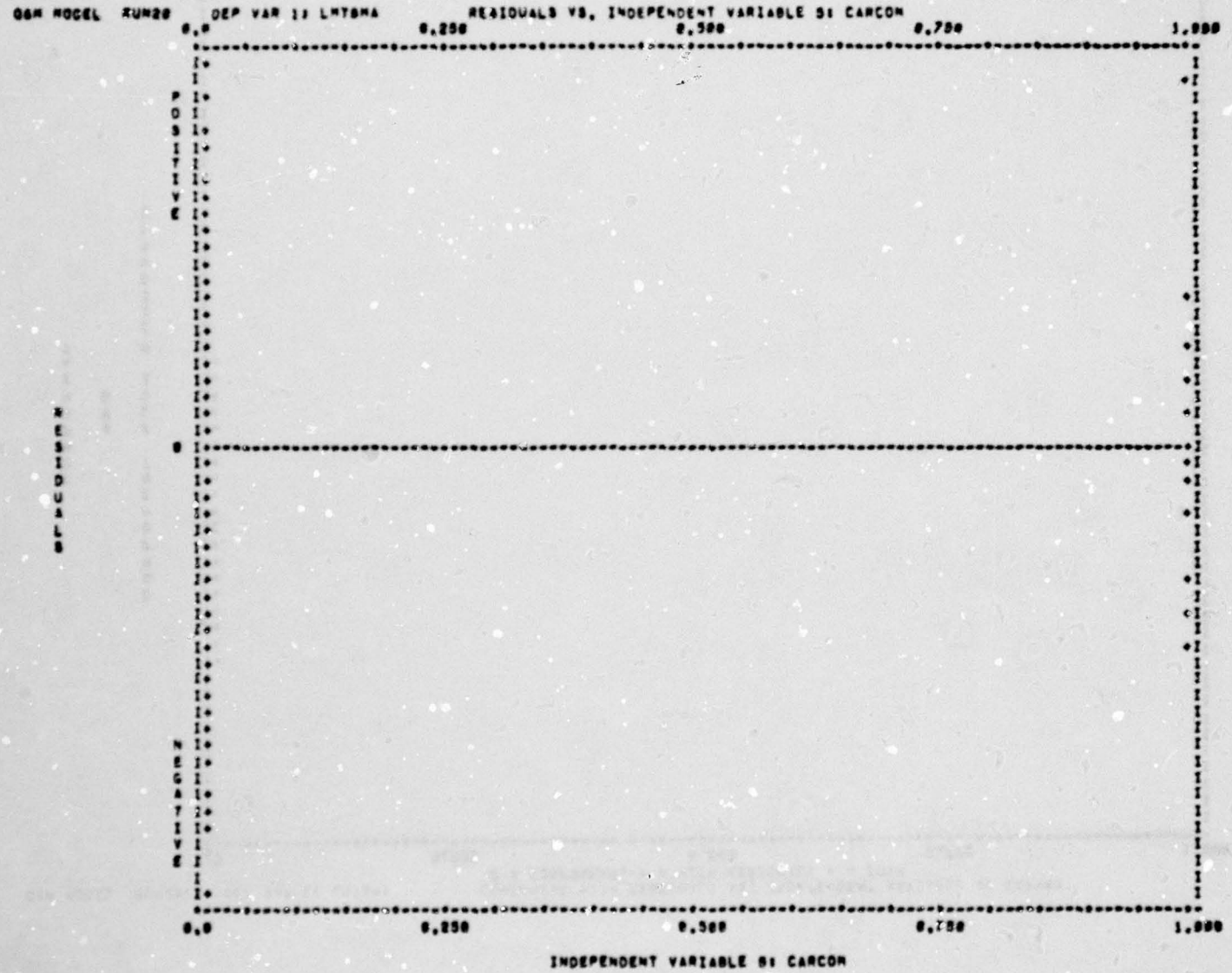

O&M MODEL RUN28 DEP VAR 11 LMTSMA COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE 21 BOMNAV
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
0.0
0.250
0.500
0.750
1.000
COMPONENT PLUS RESIDUAL
AND
COMPONENT
INDEPENDENT VARIABLE 21 BOMNAV
0 RESIDUALS OUTSIDE OF PLOT

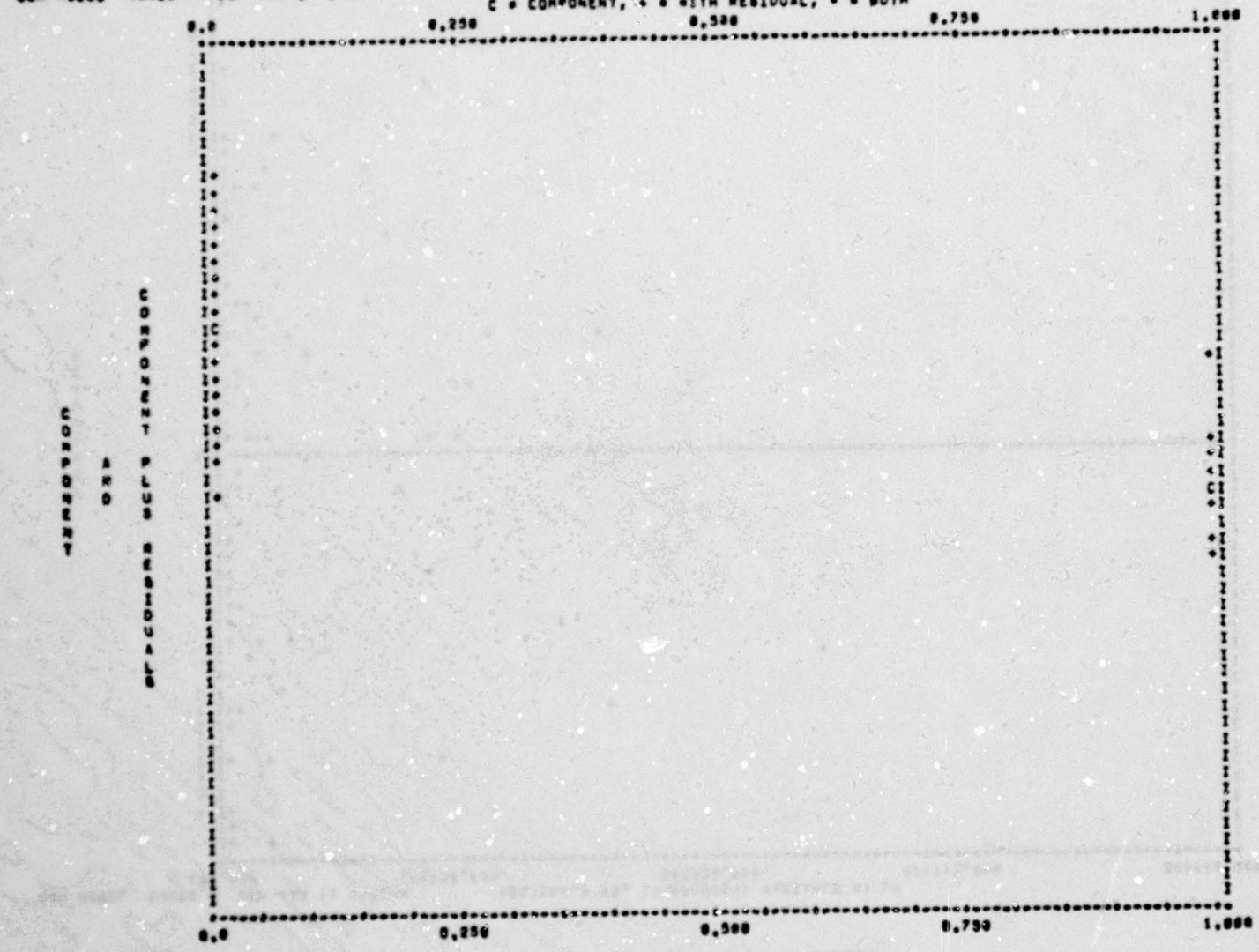

O&M MODEL RUN20 DEP VAR 1: LMTBMA RESIDUALS VS. INDEPENDENT VARIABLE 3: BOMCOM
0.0
0.250
0.500
0.750
1.000
POSITIVE
0
NEGATIVE
RESIDUALS
INDEPENDENT VARIABLE 3: BOMCOM

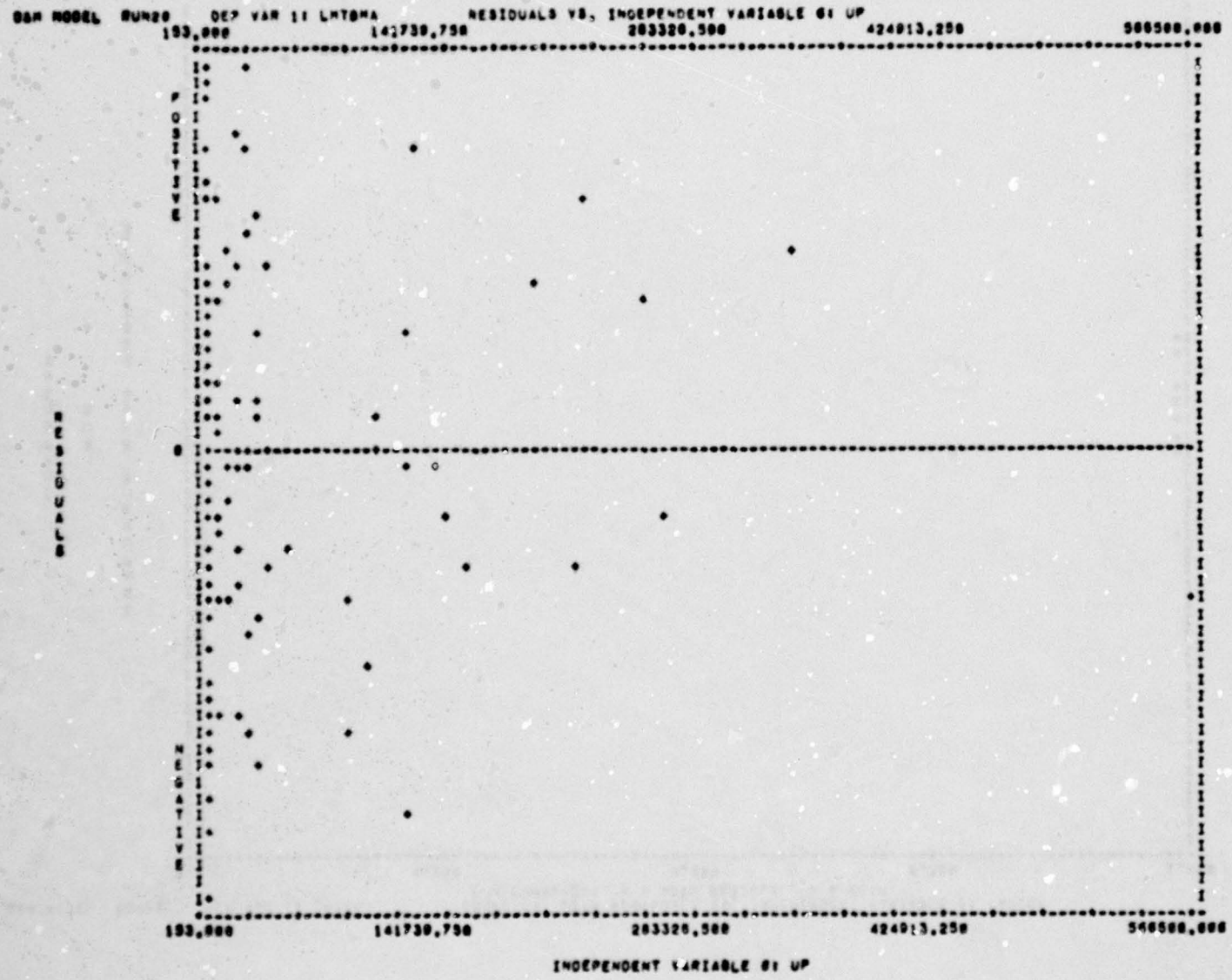

GSM MODEL RUN28 DEP VAR 1: LNTBMA
COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE 3: BOMCOM
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
0.0
0.250
0.500
0.750
1.000
COMPONENT PLUS RESIDUALS
AND
COMPONENT
INDEPENDENT VARIABLE 3: BOMCOM
0 RESIDUALS OUTSIDE OF PLOT

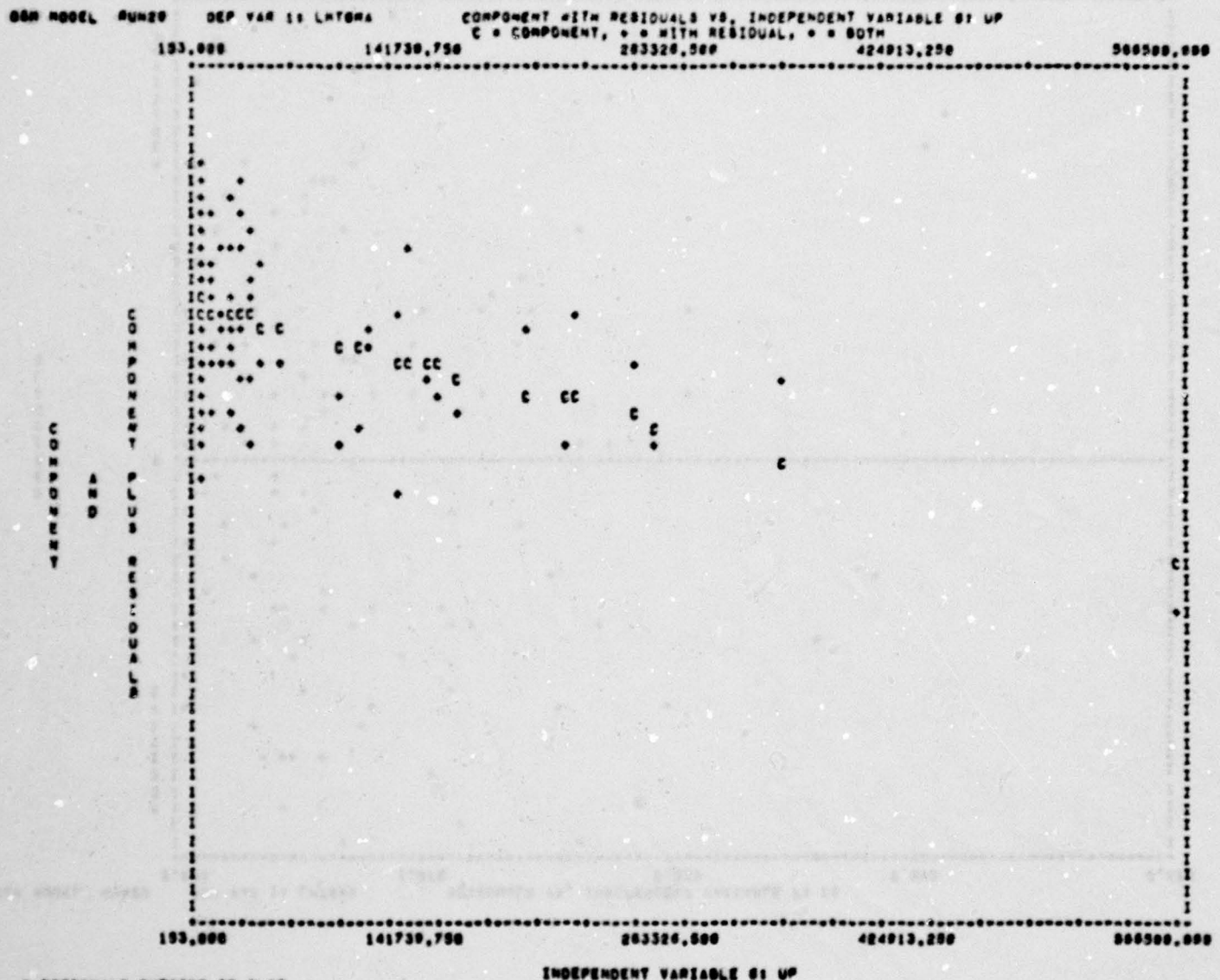

OSM MODEL RUN20 DEP VAR 1: LMTBMA RESIDUALS VS. INDEPENDENT VARIABLE 41 CARNAV
0.0
0.250
0.500
0.750
1.000
POSITIVE
RESIDUALS
0
NEGATIVE
INDEPENDENT VARIABLE 41 CARNAV

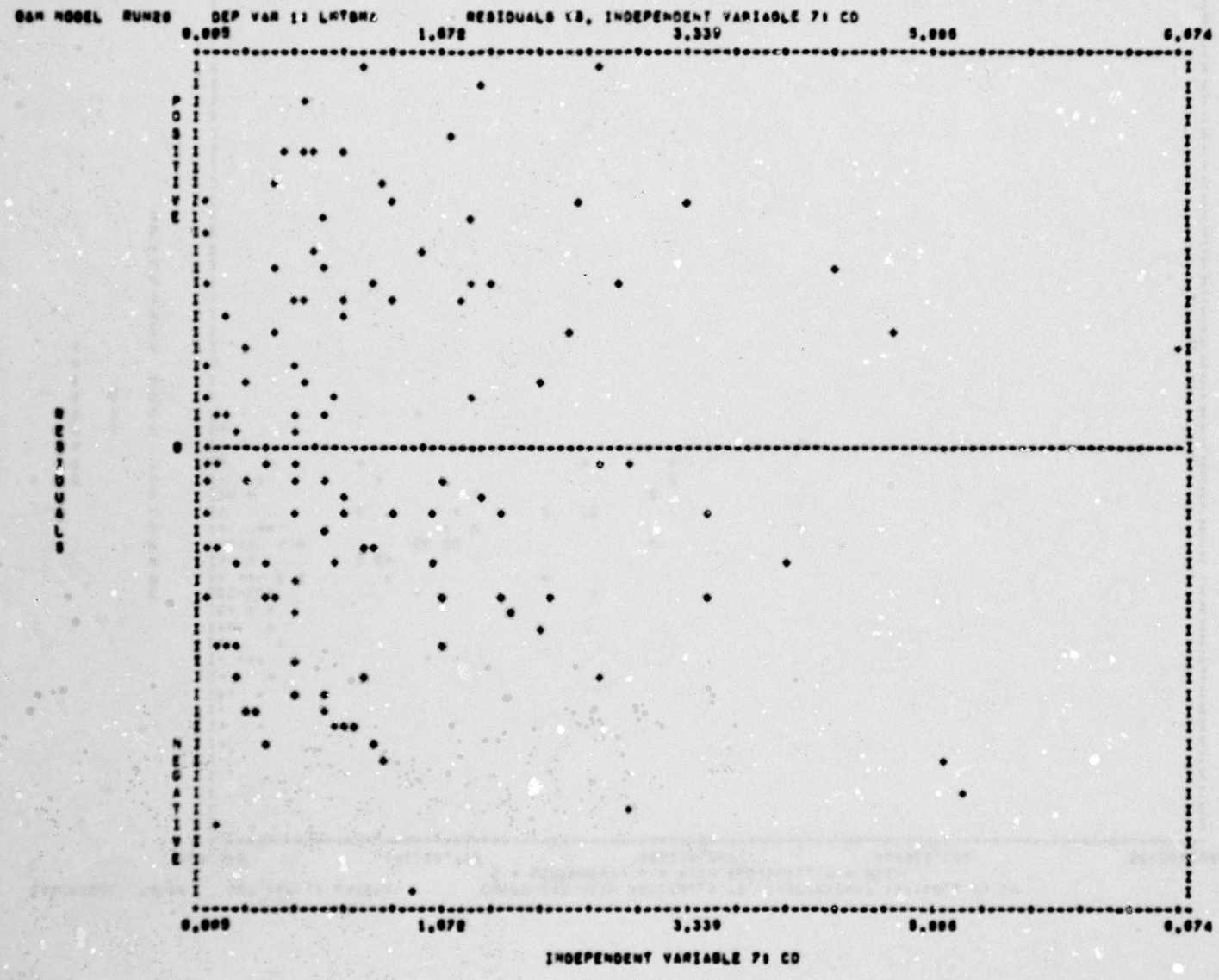

GAM MODEL RUN20 DEP VAR IS LNTSMA
COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE 41 CARNAV
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
0.0
0.250
0.500
0.750
1.000
COMPONENT PLUS RESIDUALS
AND
COMPONENT
INDEPENDENT VARIABLE 41 CARNAV
0 RESIDUALS OUTSIDE OF PLOT

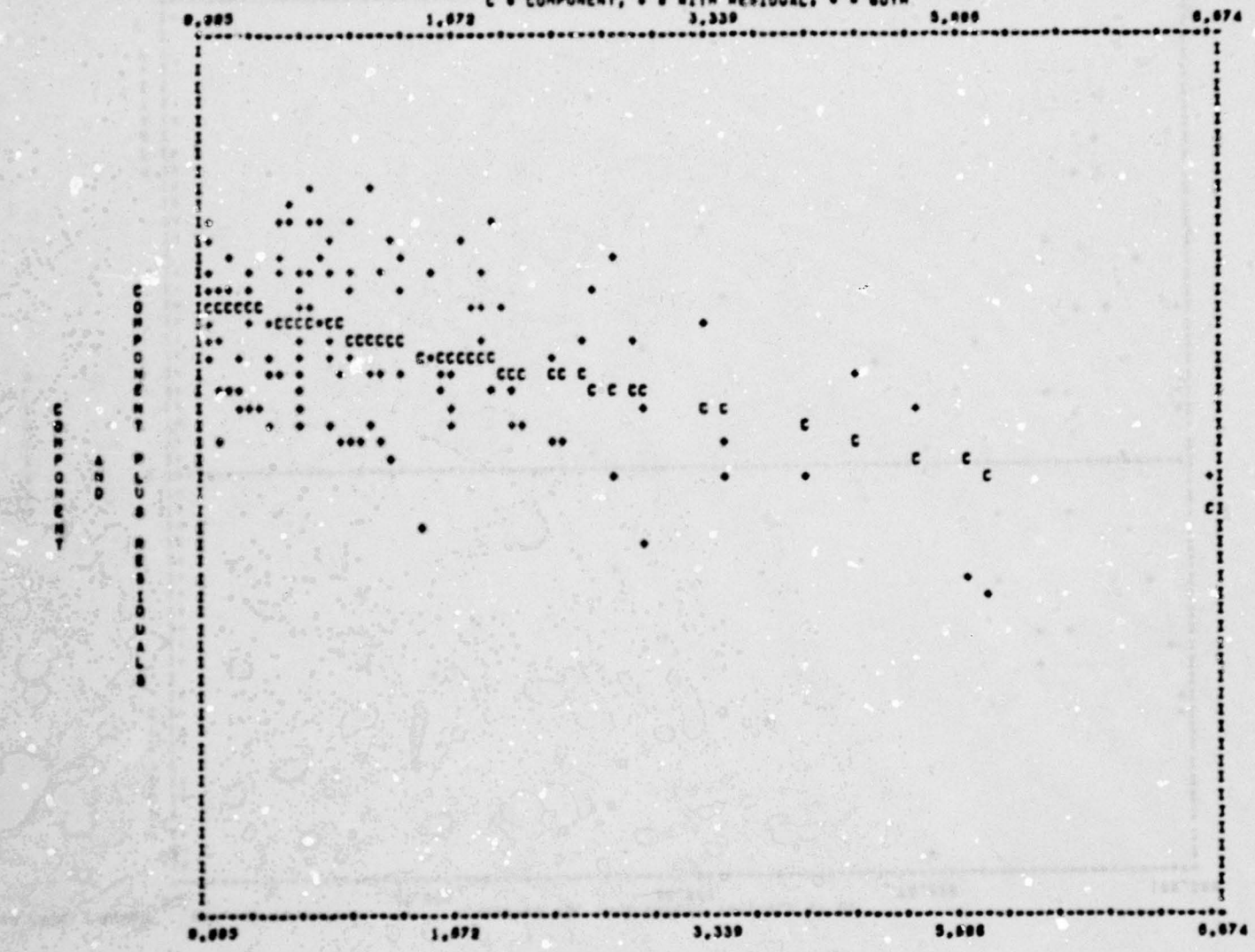

G&M MODEL RUN20 DEP VAR 1: LMTBMA RESIDUALS VS. INDEPENDENT VARIABLE 51 CARCON
0.0
0.250
0.500
0.750
1.000
POSITIVE
RESIDUALS
0
NEGATIVE
INDEPENDENT VARIABLE 51 CARCON

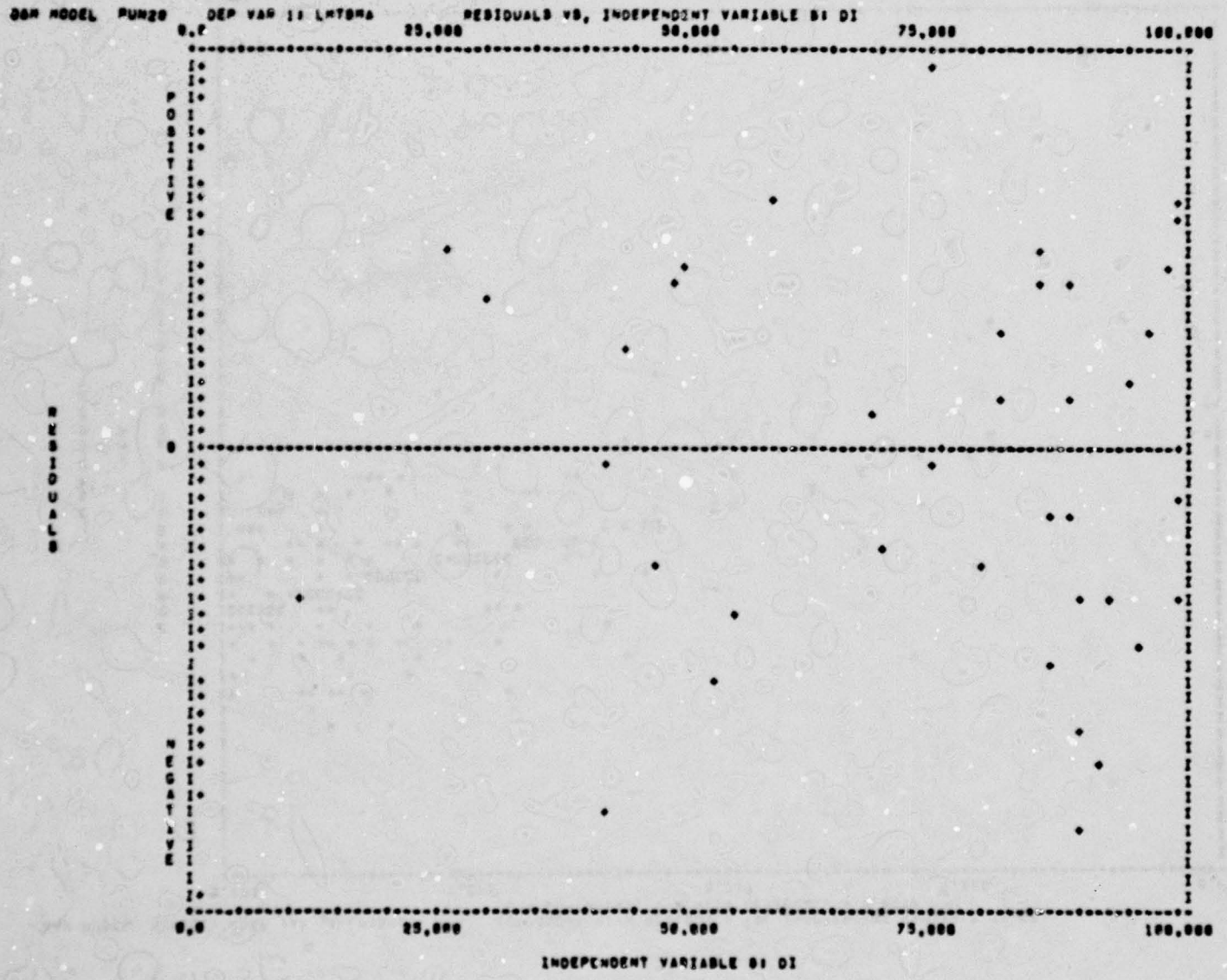

GAM MODEL RUN20 DEP VAR IS LNTSHA
COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE 8: CARCOM
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
0.0
0.250
0.500
0.750
1.000
COMPONENT PLUS RESIDUAL
AND
COMPONENT
INDEPENDENT VARIABLE 8: CARCOM
0 RESIDUALS OUTSIDE OF PLOT

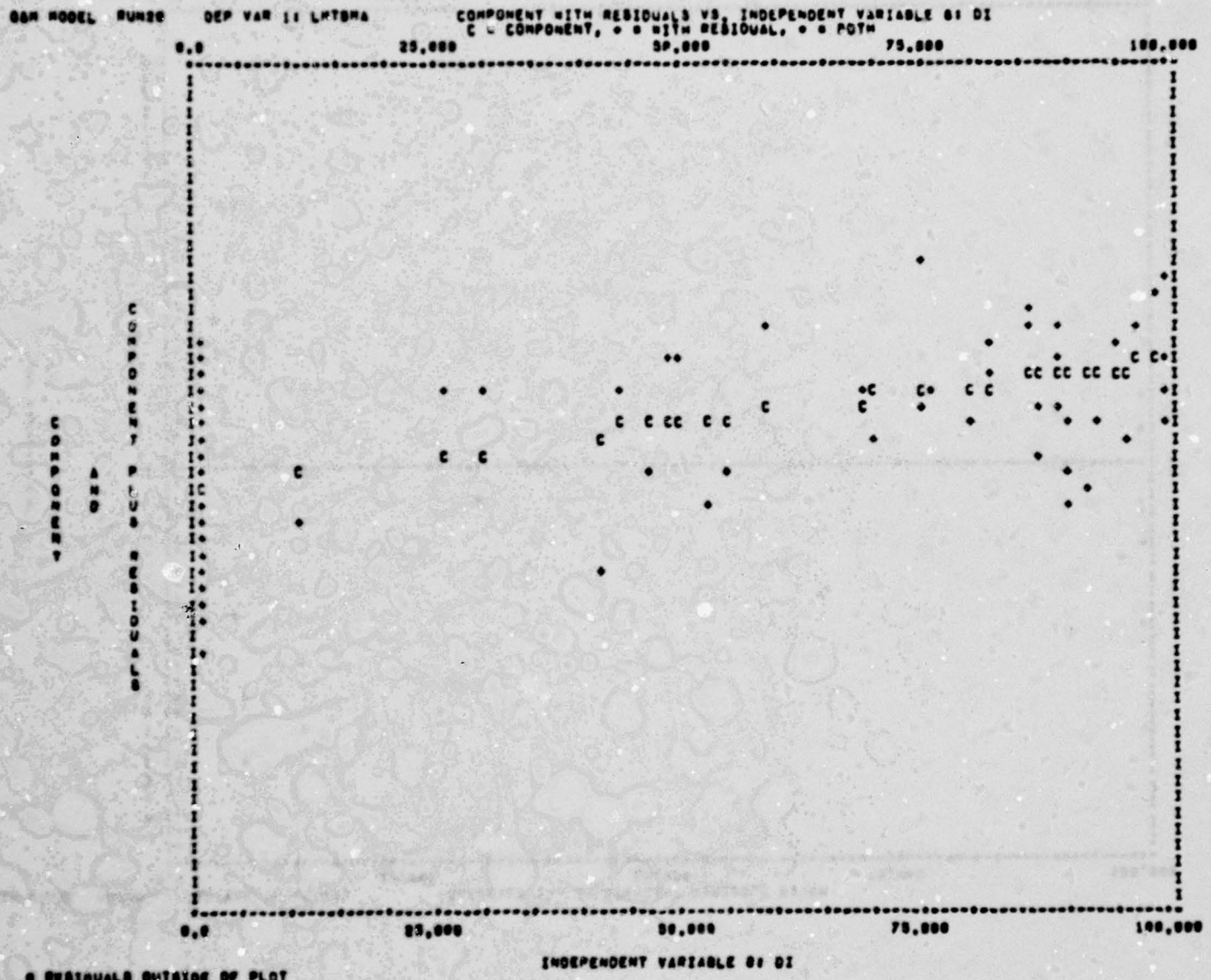

B&H MODEL RUN20 DEP VAR IS LNTSMA RESIDUALS VS. INDEPENDENT VARIABLE 61 UP
193,000
141739,750
283326,500
424913,250
566500,000
RESIDUALS
POSITIVE
0
NEGATIVE
INDEPENDENT VARIABLE 61 UP

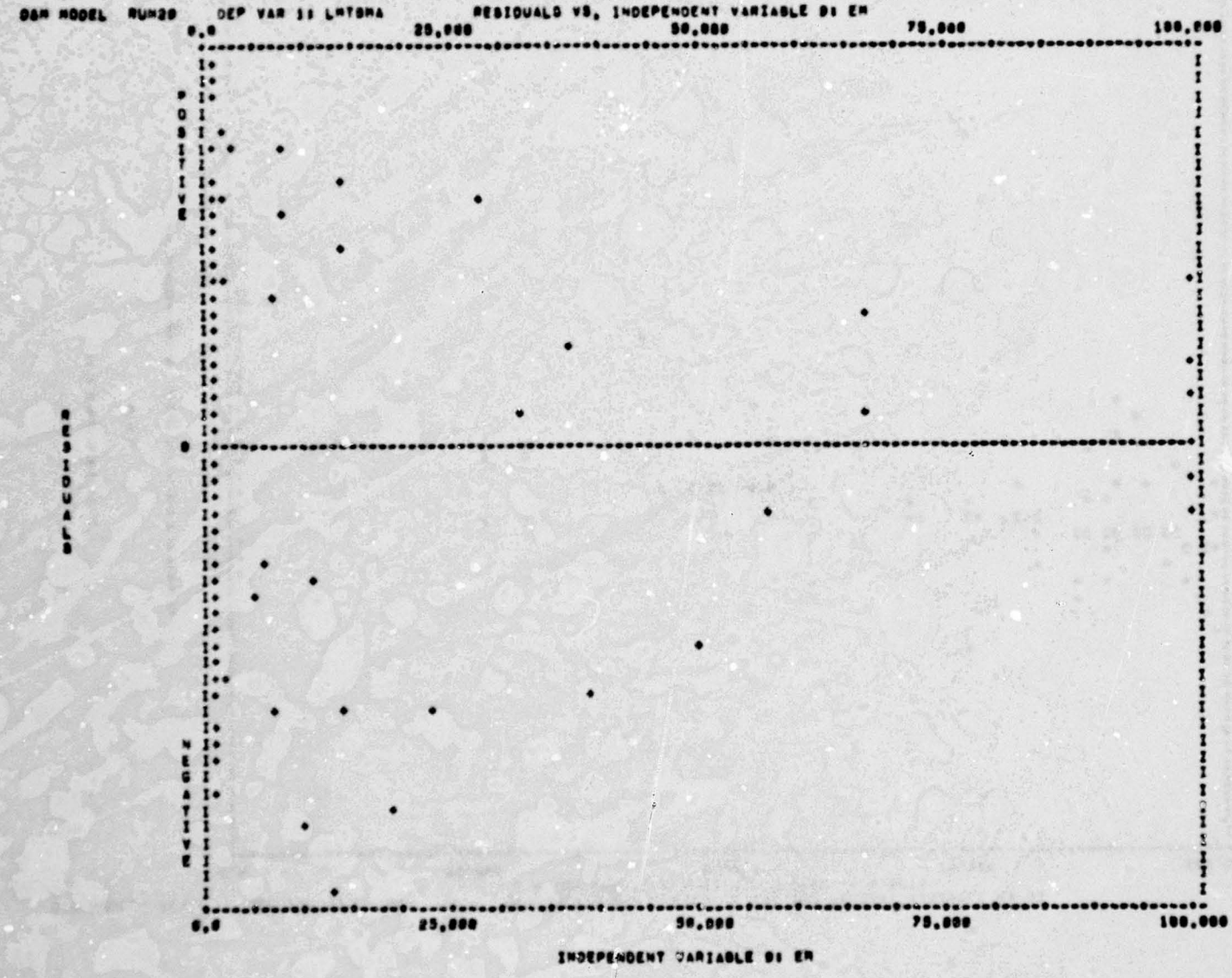

OGR MODEL RUN29 DEP VAR IS LNTGMA COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE 61 UP
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
193.000
141739.750
283326.500
424913.250
566500.000
COMPONENT PLUS RESIDUALS
COMPONENT AND
INDEPENDENT VARIABLE 61 UP
0 RESIDUALS OUTSIDE OF PLOT

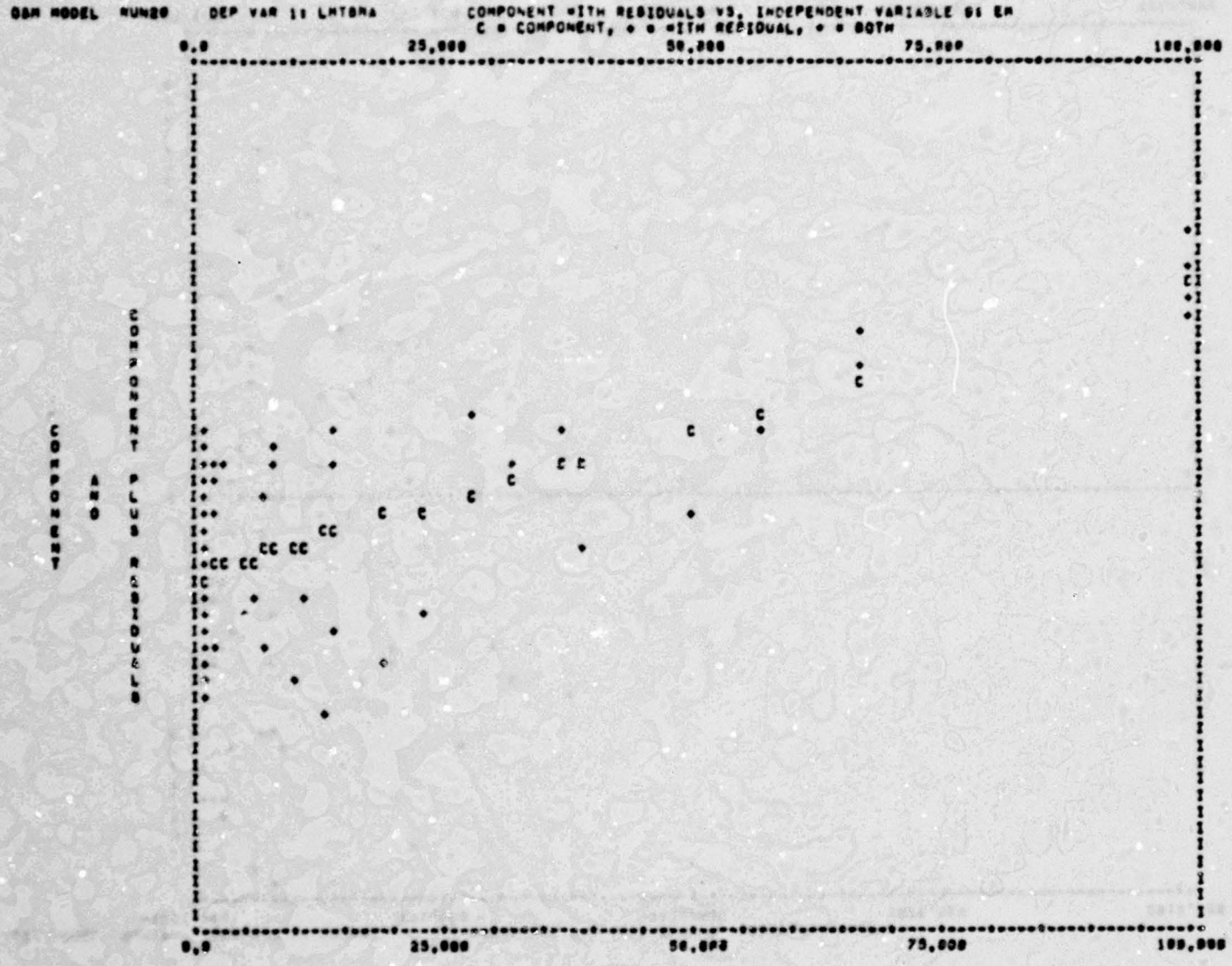

GSM MODEL RUN20 DEP VAR 11 LNTSHZ RESIDUALS (S, INDEPENDENT VARIABLE 7: CO
0,009
1,670
3,330
5,000
6,674
POSITIVE
0
NEGATIVE
RESIDUALS
INDEPENDENT VARIABLE 7: CO

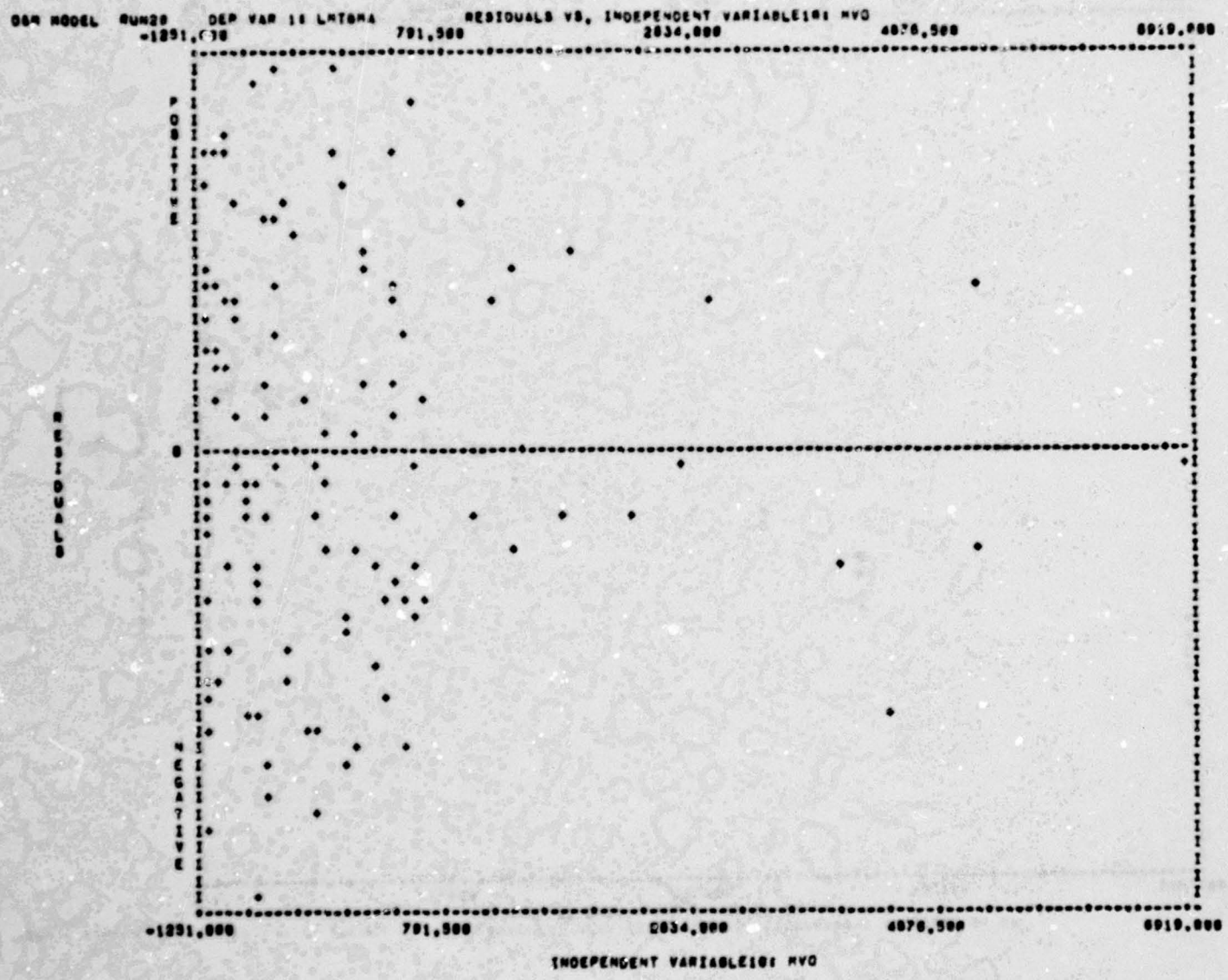

G&R MODEL RUN80 DEP VAR IS LMYBMA COMPONENT +WITH RESIDUALS VS. INDEPENDENT VARIABLE IS CD
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
0.085
1.672
3.339
5.006
6.674
COMPONENT PLUS RESIDUALS
420
COMPONENT
INDEPENDENT VARIABLE IS CD
0 RESIDUALS OUTSIDE OF PLOT

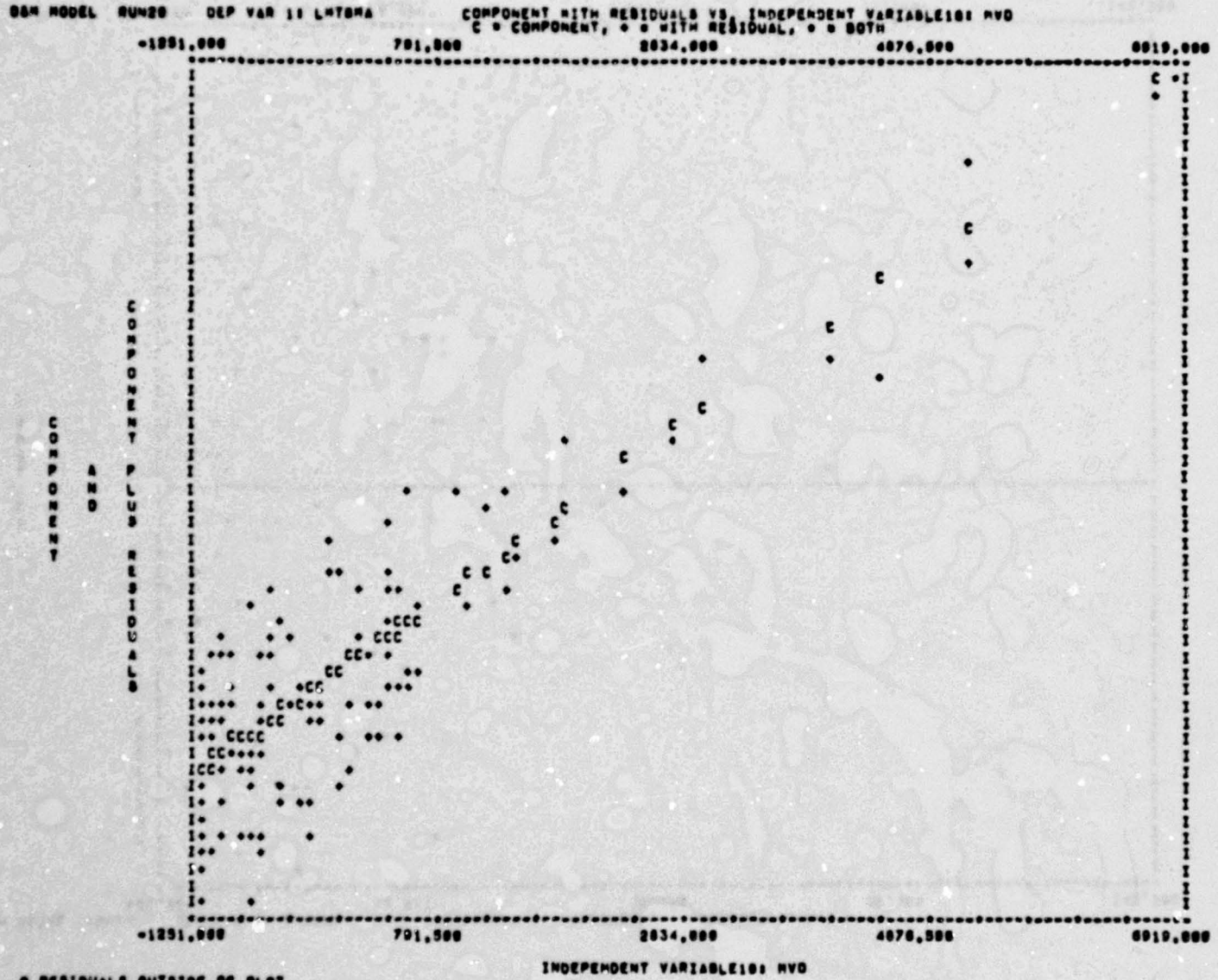

SAR MODEL PUN20 DEP VAR IS LNTSMA RESIDUALS VS. INDEPENDENT VARIABLE 8: DI
0.0
25,000
50,000
75,000
100,000
POSITIVE
RESIDUALS
0
NEGATIVE
INDEPENDENT VARIABLE 8: DI

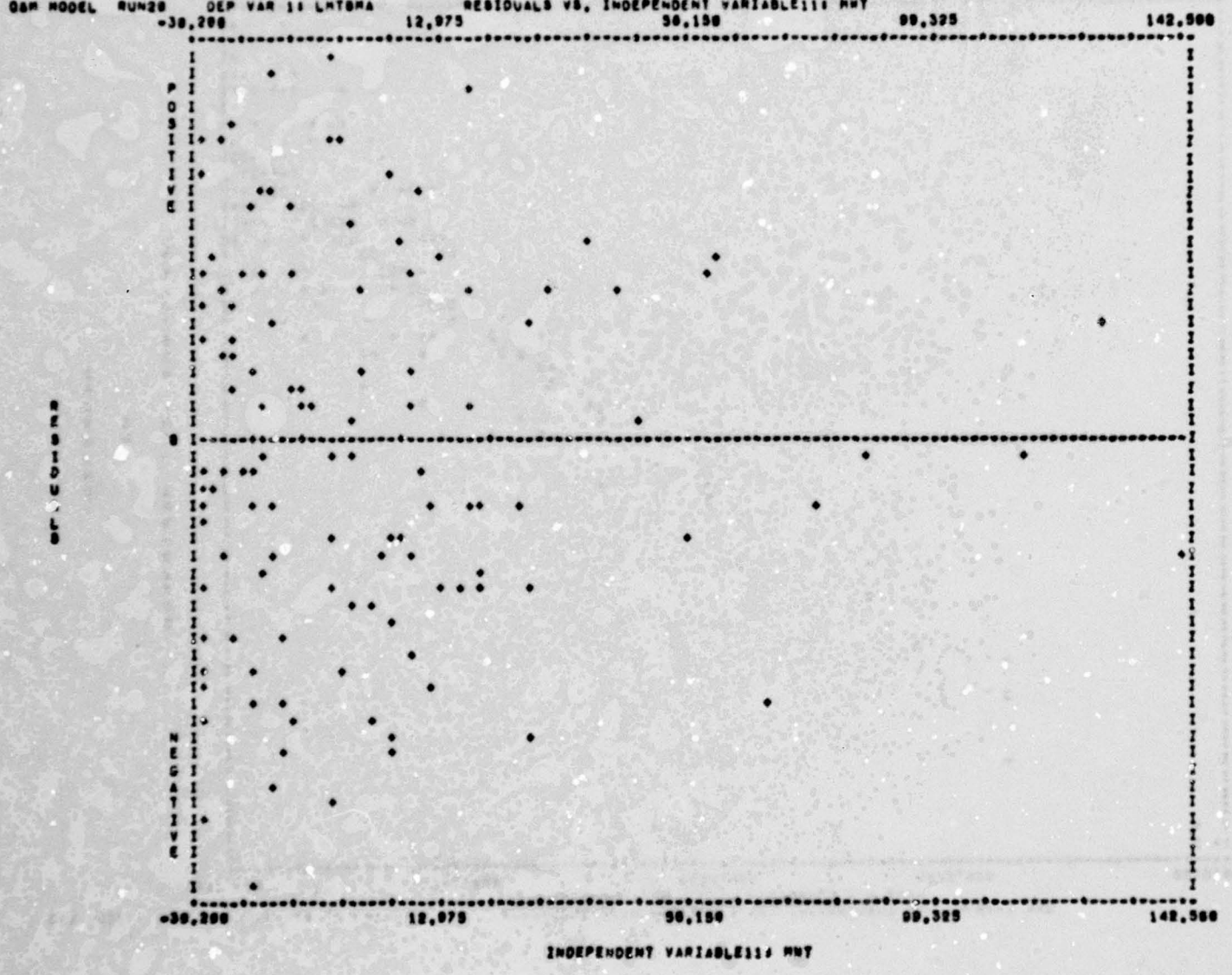

BSR MODEL RUN20 DEP VAR :: LMTBMA
COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE 81 DI
C = COMPONENT, * = WITH RESIDUAL, + = BOTH
0.0
25,000
50,000
75,000
100,000
COMPONENT PLUS RESIDUALS
AND
COMPONENT
0.0
25,000
50,000
75,000
100,000
INDEPENDENT VARIABLE 81 DI
0 RESIDUALS OUTSIDE OF PLOT

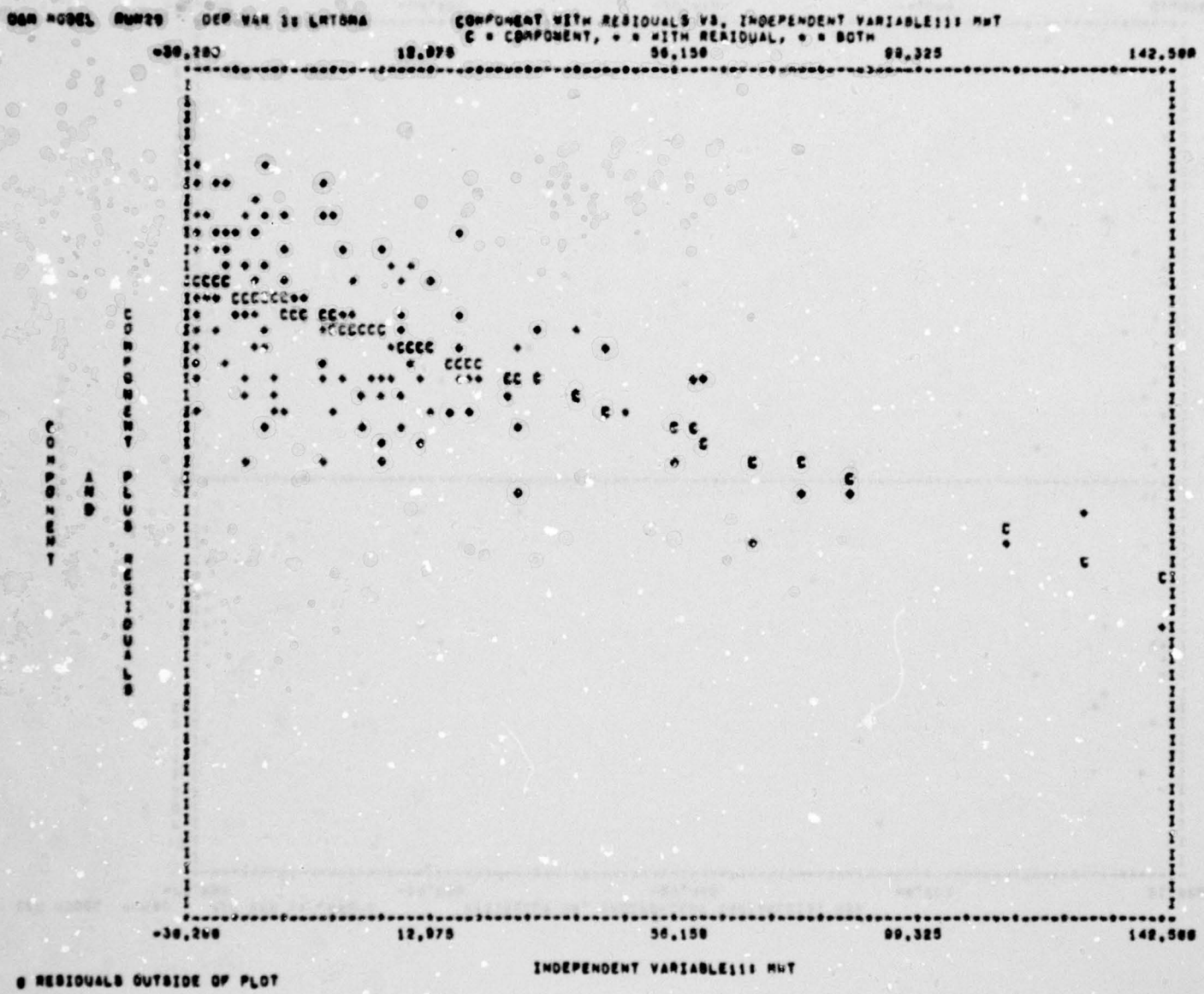

O&M MODEL RUN29 DEP VAR IS LNTSMA RESIDUALS VS. INDEPENDENT VARIABLE IS EM
0.0
25,000
50,000
75,000
100,000
POSITIVE
RESIDUALS
0
NEGATIVE
INDEPENDENT VARIABLE IS EM


GSM MODEL RUN20 DEP VAR 11 LNTSRA
COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE 91 EM
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
COMPONENT AND COMPONENT PLUS RESIDUALS
0.0
25,000
50,000
75,000
100,000
INDEPENDENT VARIABLE 91 EM
0 RESIDUALS OUTSIDE OF PLOT


OLS MODEL RUN28 DEP VAR IS LNTONA RESIDUALS VS. INDEPENDENT VARIABLE(S): NVO
-1291,000
791,500
2834,000
4876,500
6919,000
POSITIVE
0
NEGATIVE
RESIDUALS
INDEPENDENT VARIABLE(S): NVO

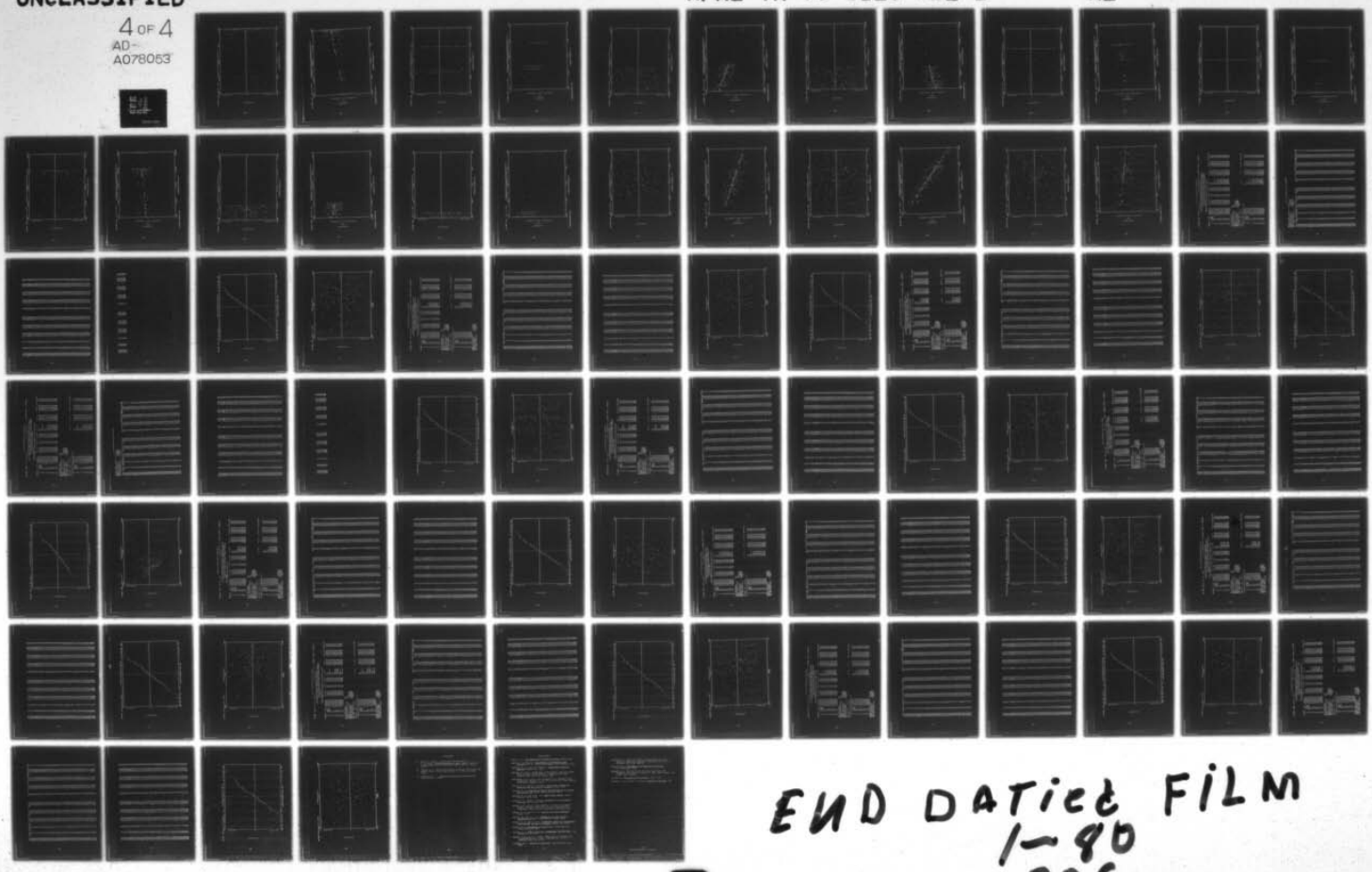

BSM MODEL RUN20 DEP VAR IS LNTSMA
COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE10: NVD
C = COMPONENT, * = WITH RESIDUAL, @ = BOTH
-1251.000
791.000
2834.000
4876.000
6919.000
COMPONENT AND COMPONENT PLUS RESIDUALS
INDEPENDENT VARIABLE10: NVD
@ RESIDUALS OUTSIDE OF PLOT


G&M MODEL RUN28 DEP VAR 1: LNTSMA RESIDUALS VS. INDEPENDENT VARIABLE11: MNT
-38,288
12,975
38,138
88,325
142,588
POSITIVE
RESIDUALS
0
NEGATIVE
-38,288
12,975
38,138
88,325
142,588
INDEPENDENT VARIABLE11: MNT

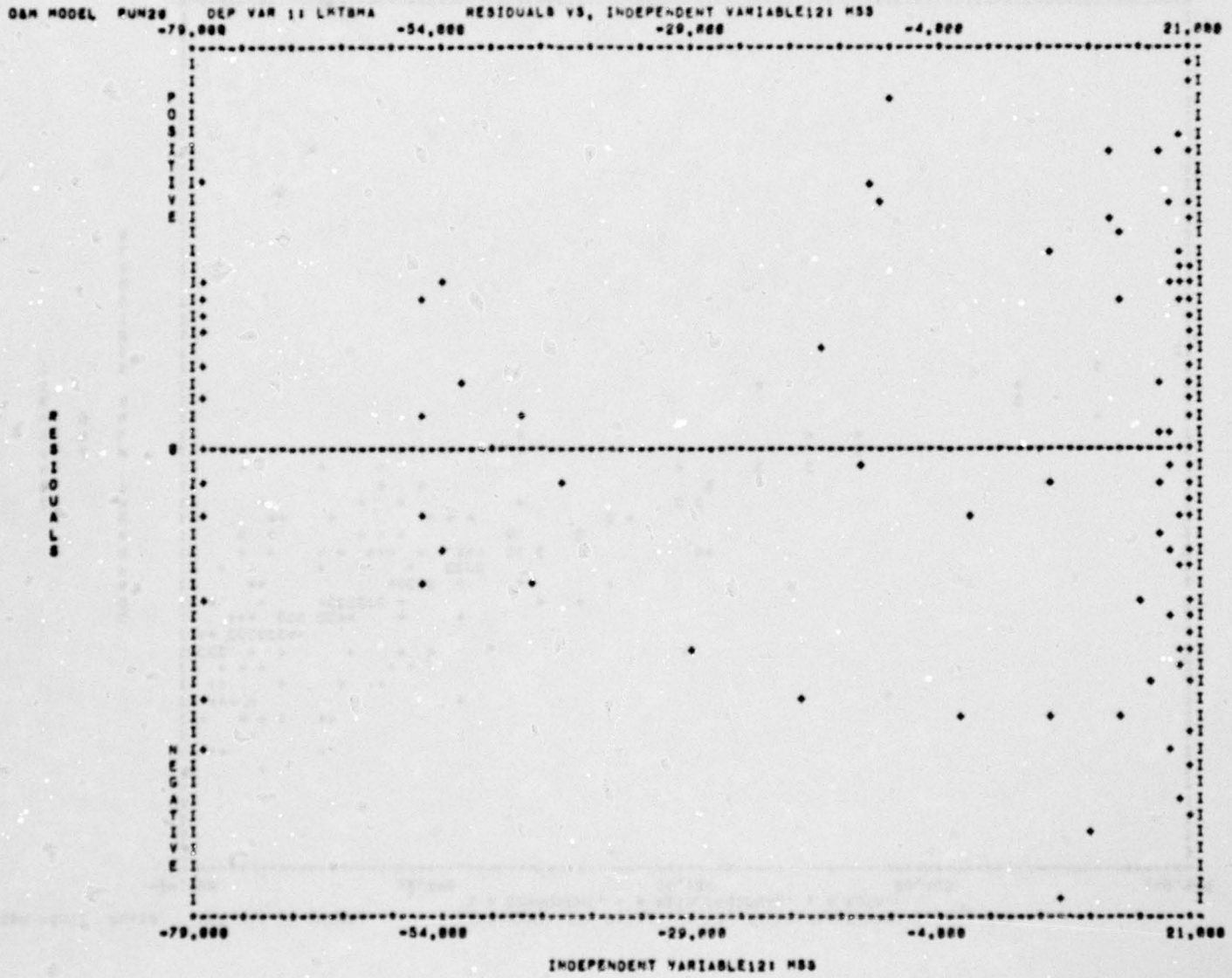

OSR MODEL RUN29 DEP VAR IS LRTORA
COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE(S): MWT
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
-30,280
18,975
56,150
93,325
142,500
COMPONENT AND COMPONENT PLUS RESIDUALS
INDEPENDENT VARIABLE(S): MWT
0 RESIDUALS OUTSIDE OF PLOT

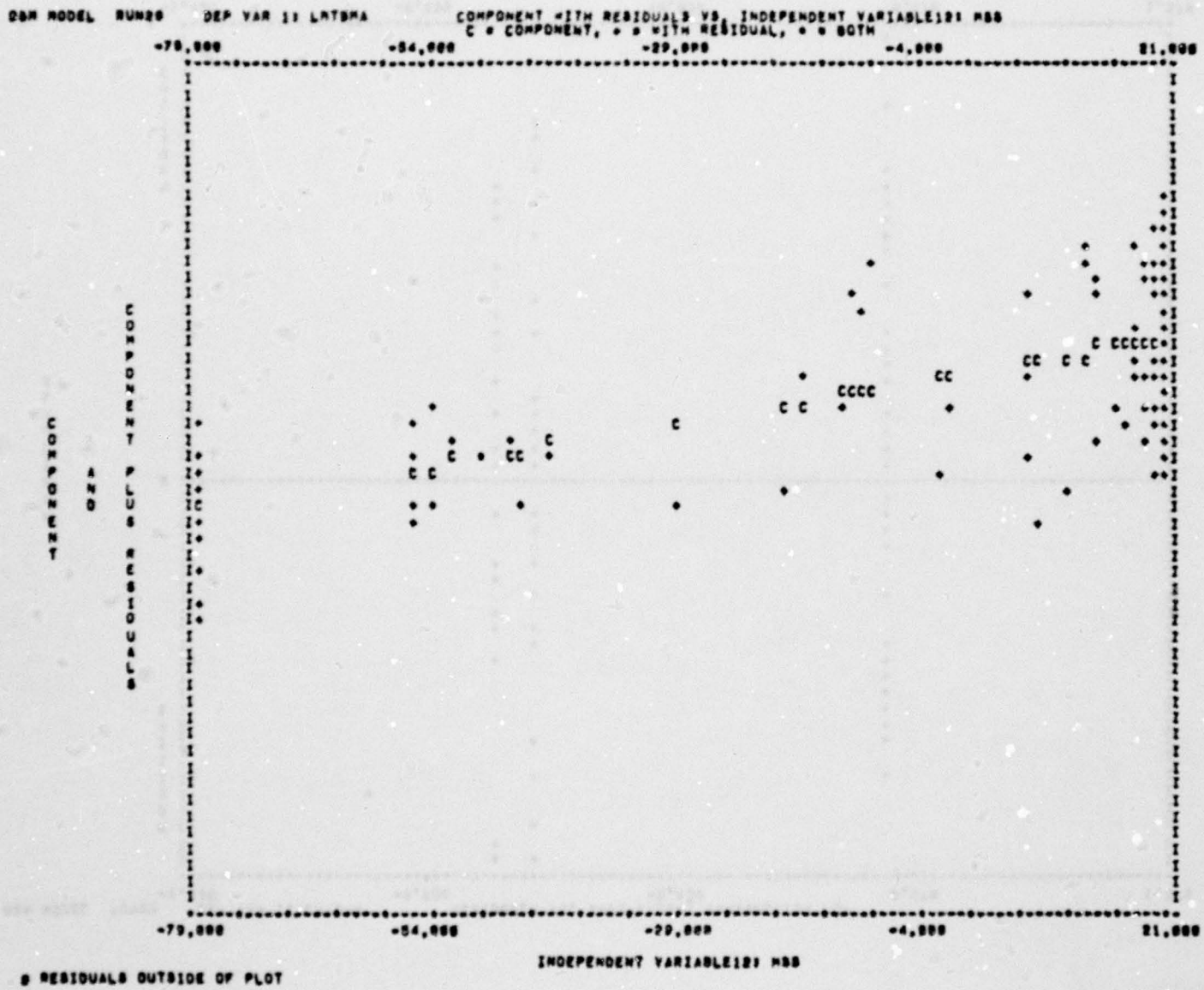
AD-A078 053 WESTINGHOUSE ELECTRIC CORP HUNT VALLEY MD F/G 14/1
PREDICTIVE OPERATIONS AND MAINTENANCE COST MODEL. VOLUME II.(U)
AUG 79 E E FELTUS F33615-77-C-1105
UNCLASSIFIED AFAL-TR-79-1120-VOL-2 NL

4 OF 4
AD-
A078053

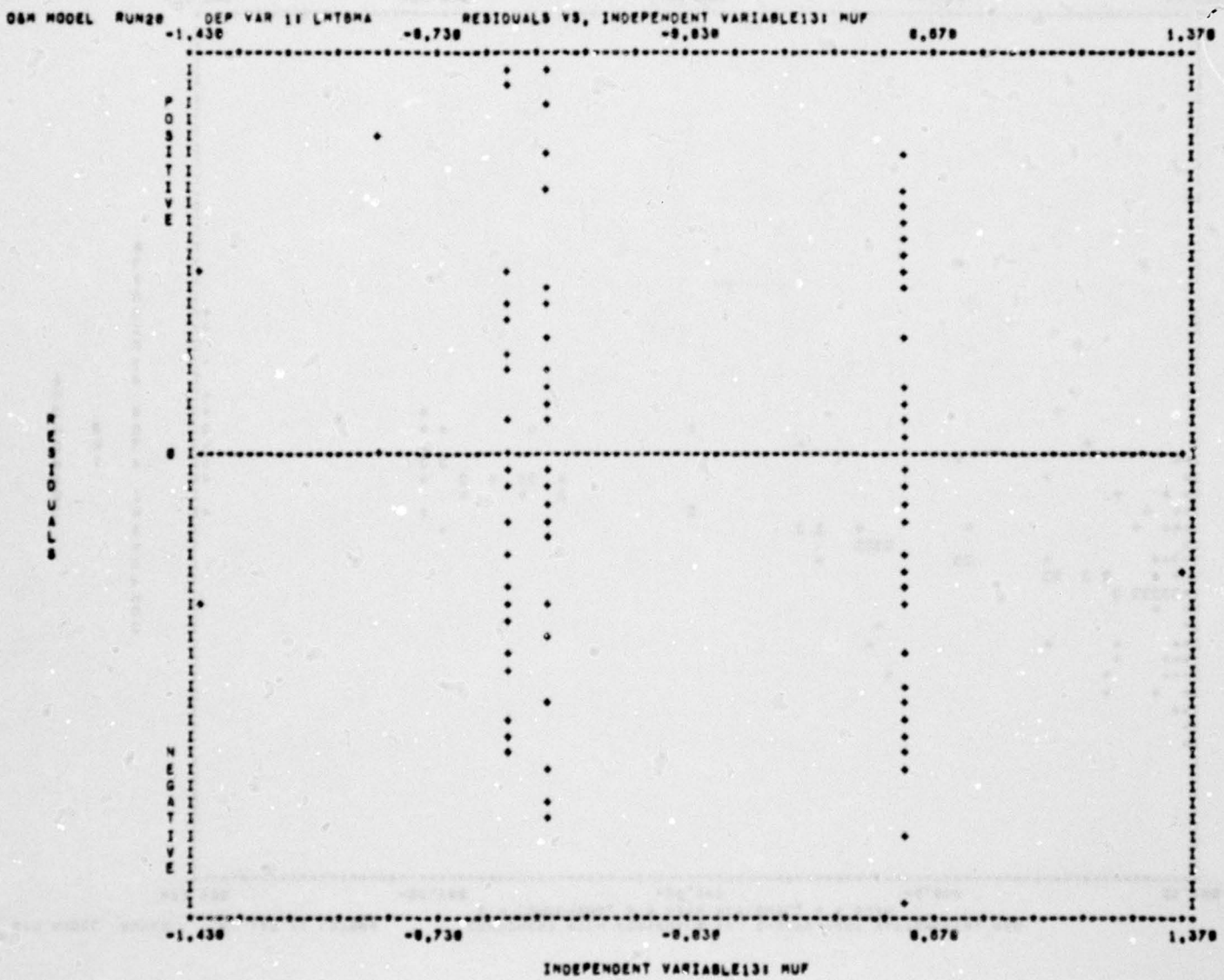


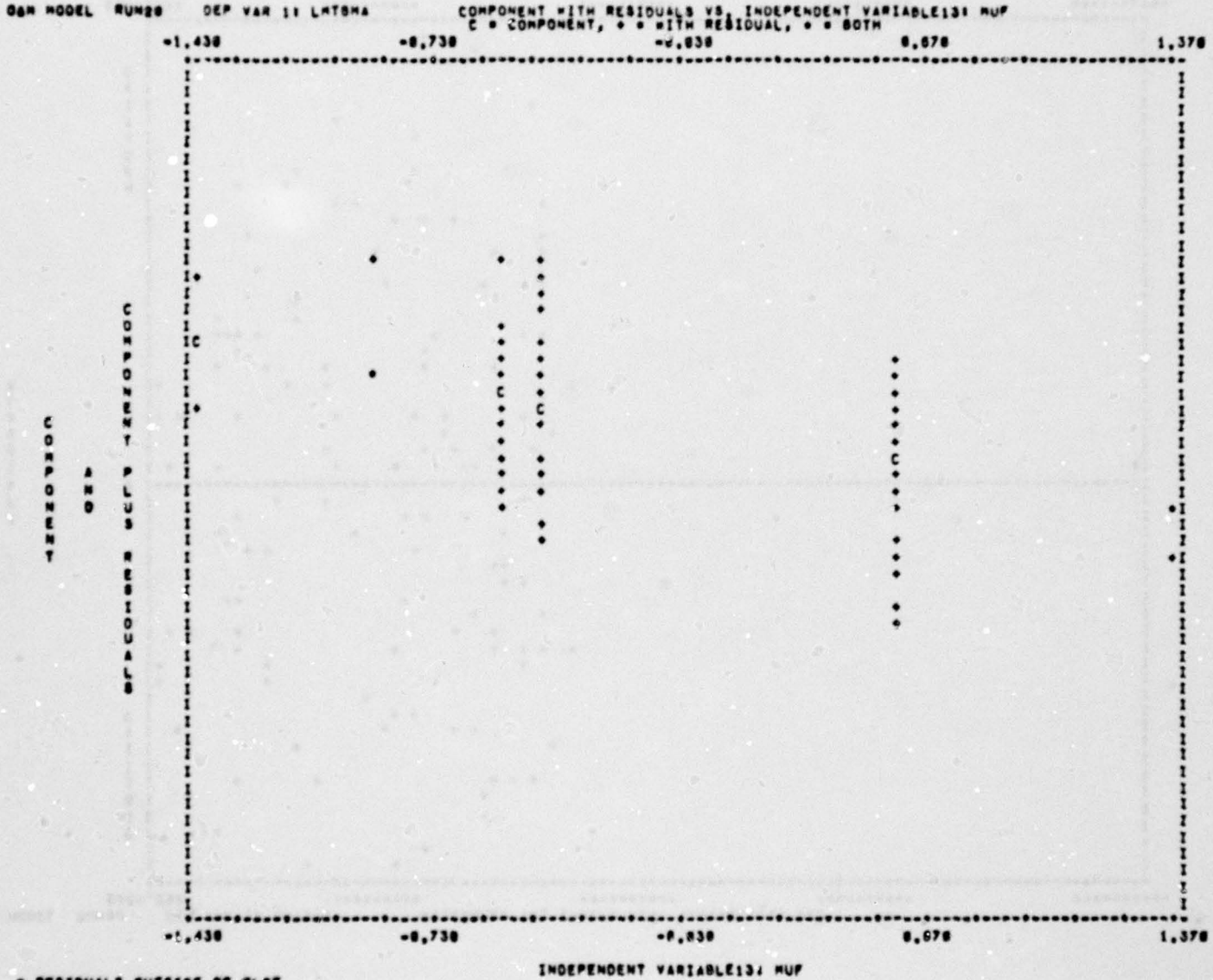
END DATE FILMED
1-80
DDC

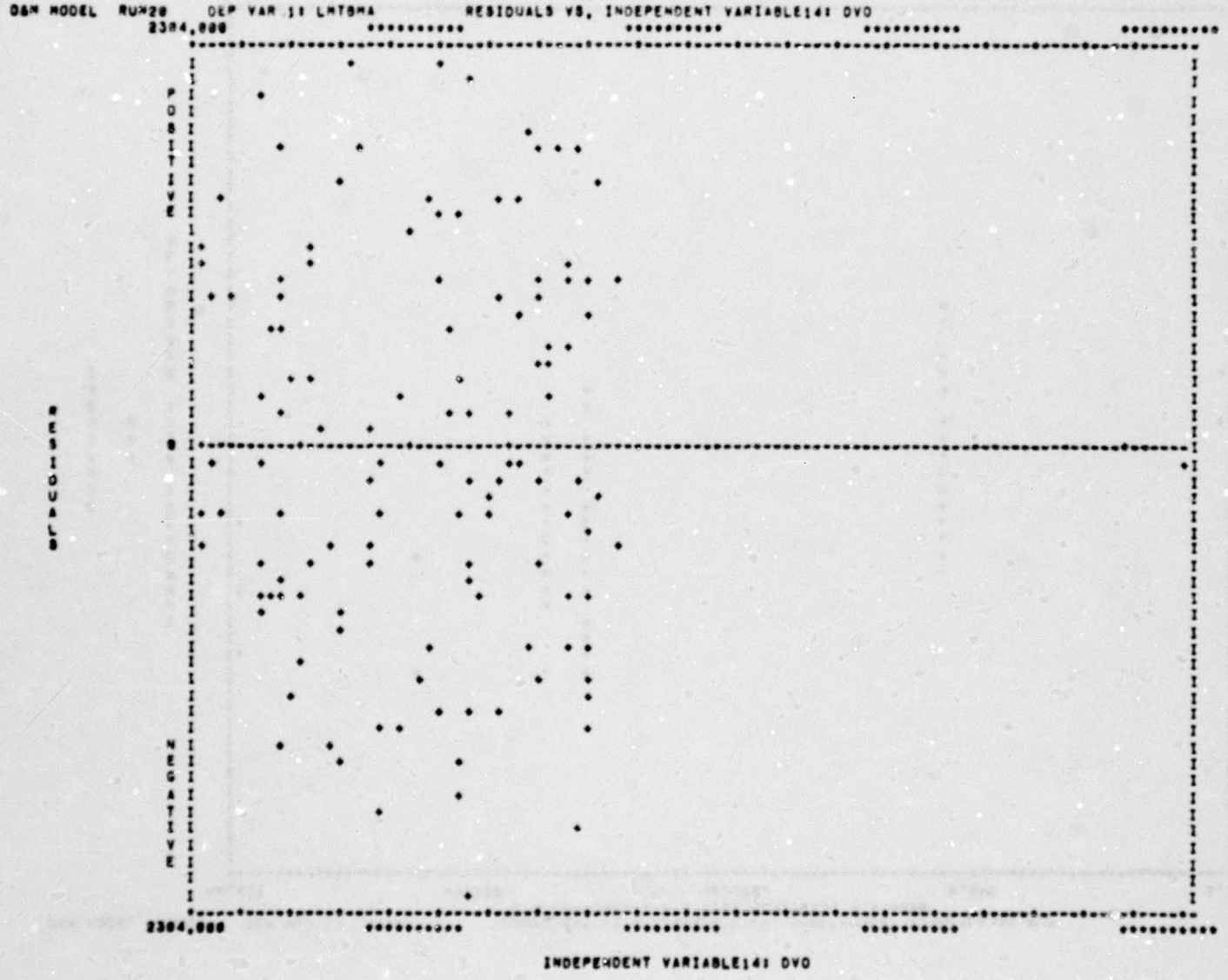

O&M MODEL PUN28 DEP VAR 1: LMTBMA RESIDUALS VS. INDEPENDENT VARIABLE12: MSS
-79,000
-54,000
-29,000
-4,000
21,000
POSITIVE
RESIDUALS
0
NEGATIVE
INDEPENDENT VARIABLE12: MSS

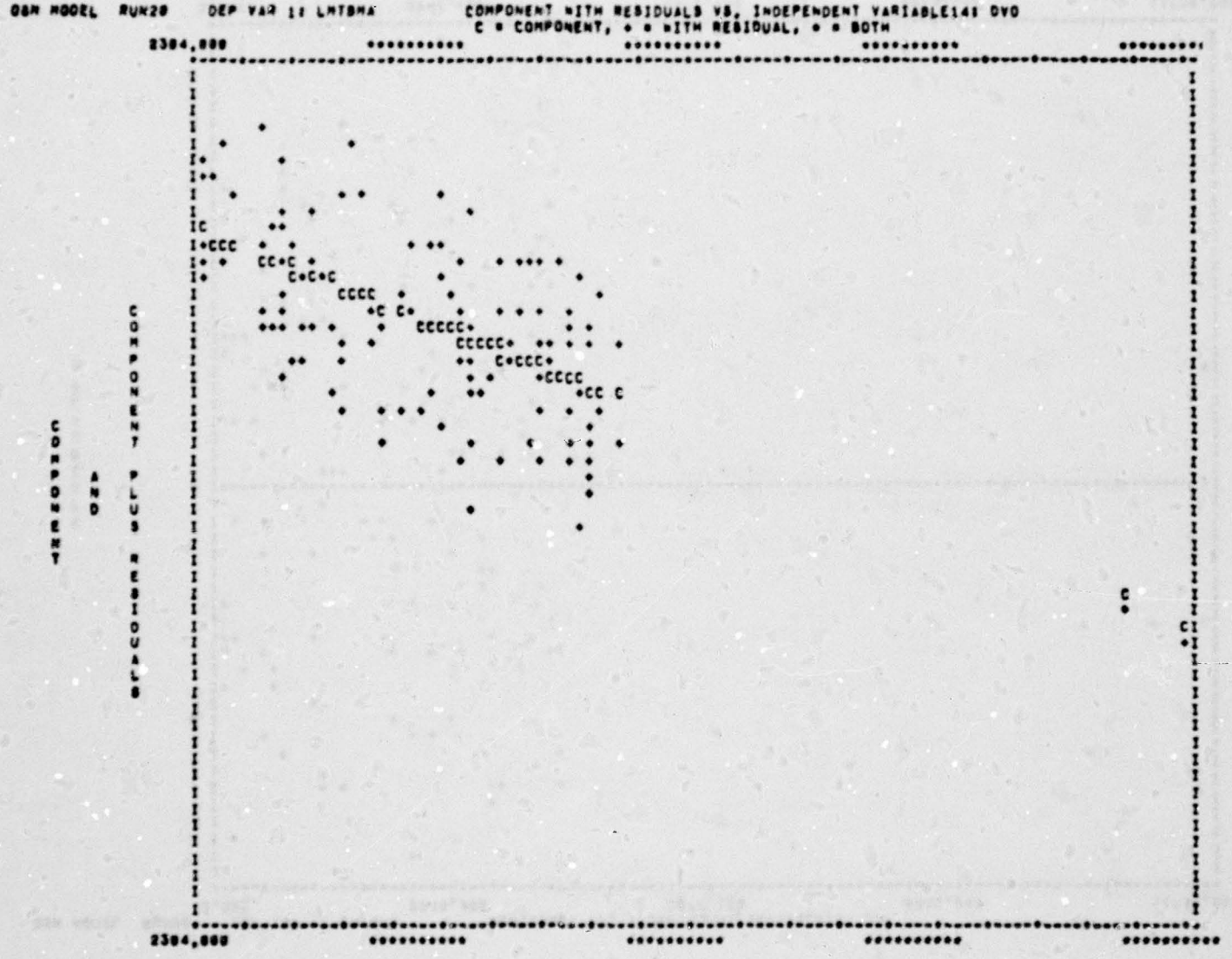


0 RESIDUALS OUTSIDE OF PLOT

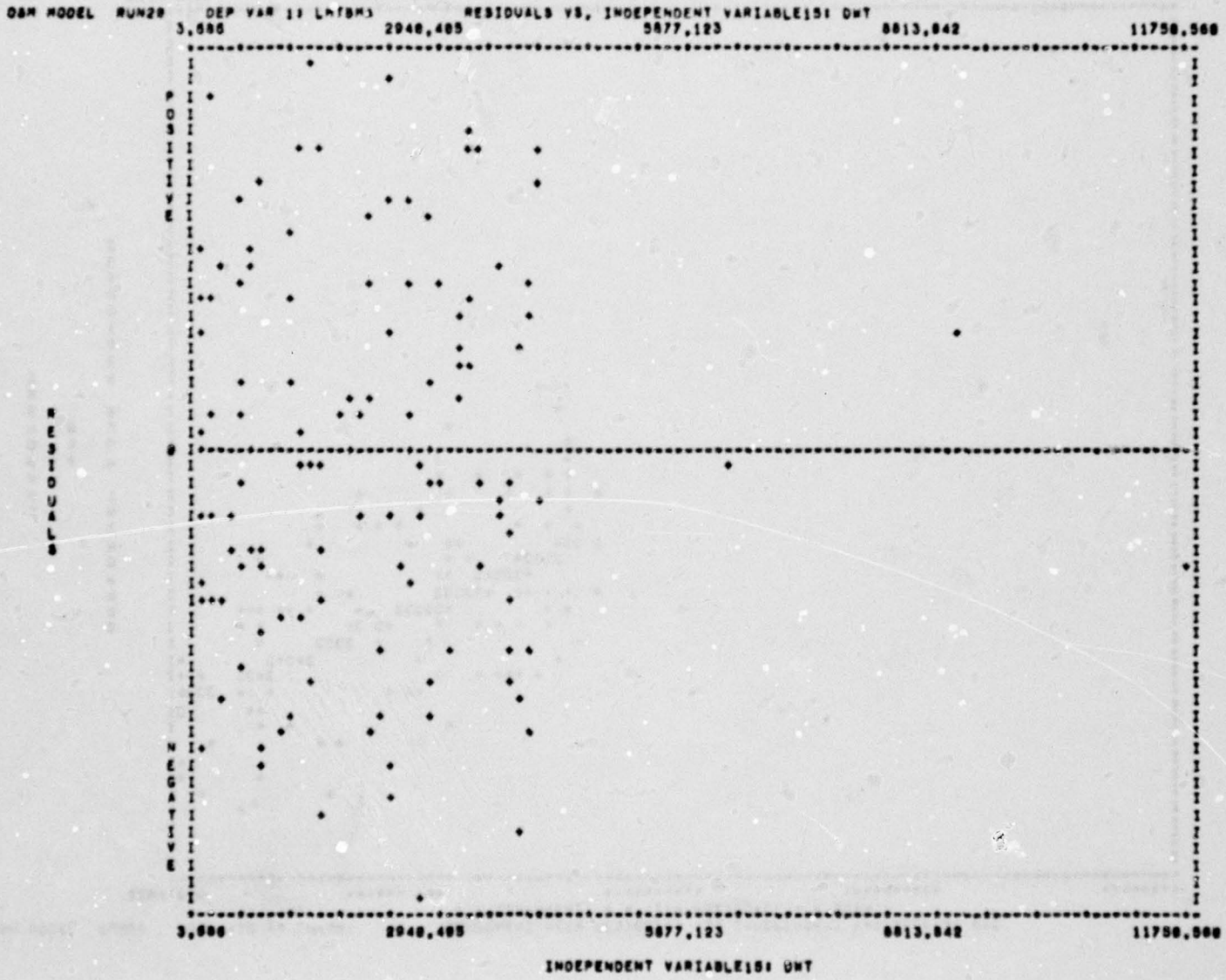

G&M MODEL RUN28 DEP VAR IS LMTBMA RESIDUALS VS. INDEPENDENT VARIABLE(3): MUF
-1.438
-0.738
-0.038
0.678
1.378
POSITIVE
0
NEGATIVE
RESIDUALS
INDEPENDENT VARIABLE(3): MUF

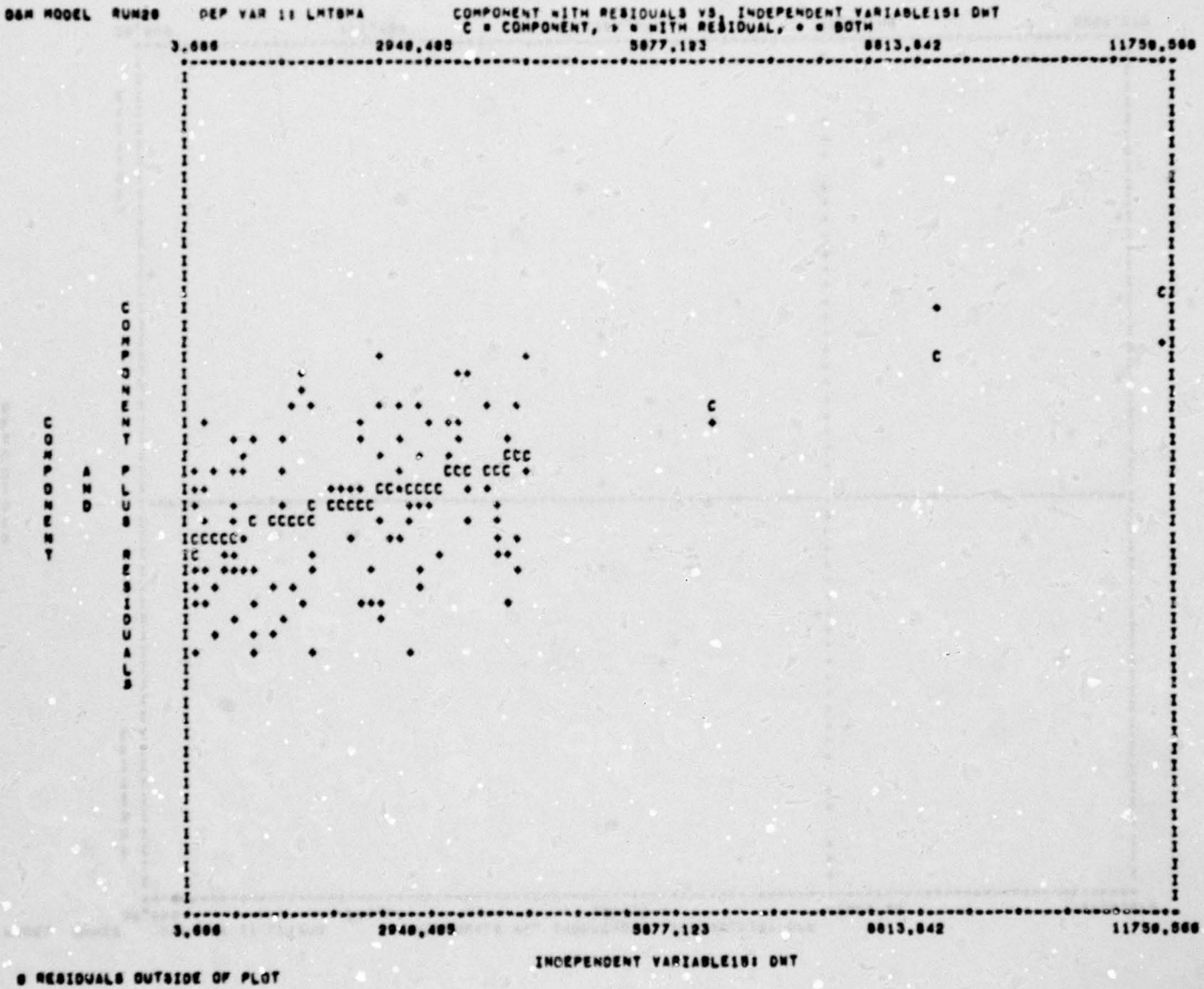

G&M MODEL RUN20 DEP VAR IS LMTSMA COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE13: MUF
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
-1.438
-0.738
-0.038
0.678
1.378
COMPONENT PLUS RESIDUAL
COMPONENT AND
INDEPENDENT VARIABLE13: MUF
0 RESIDUALS OUTSIDE OF PLOT

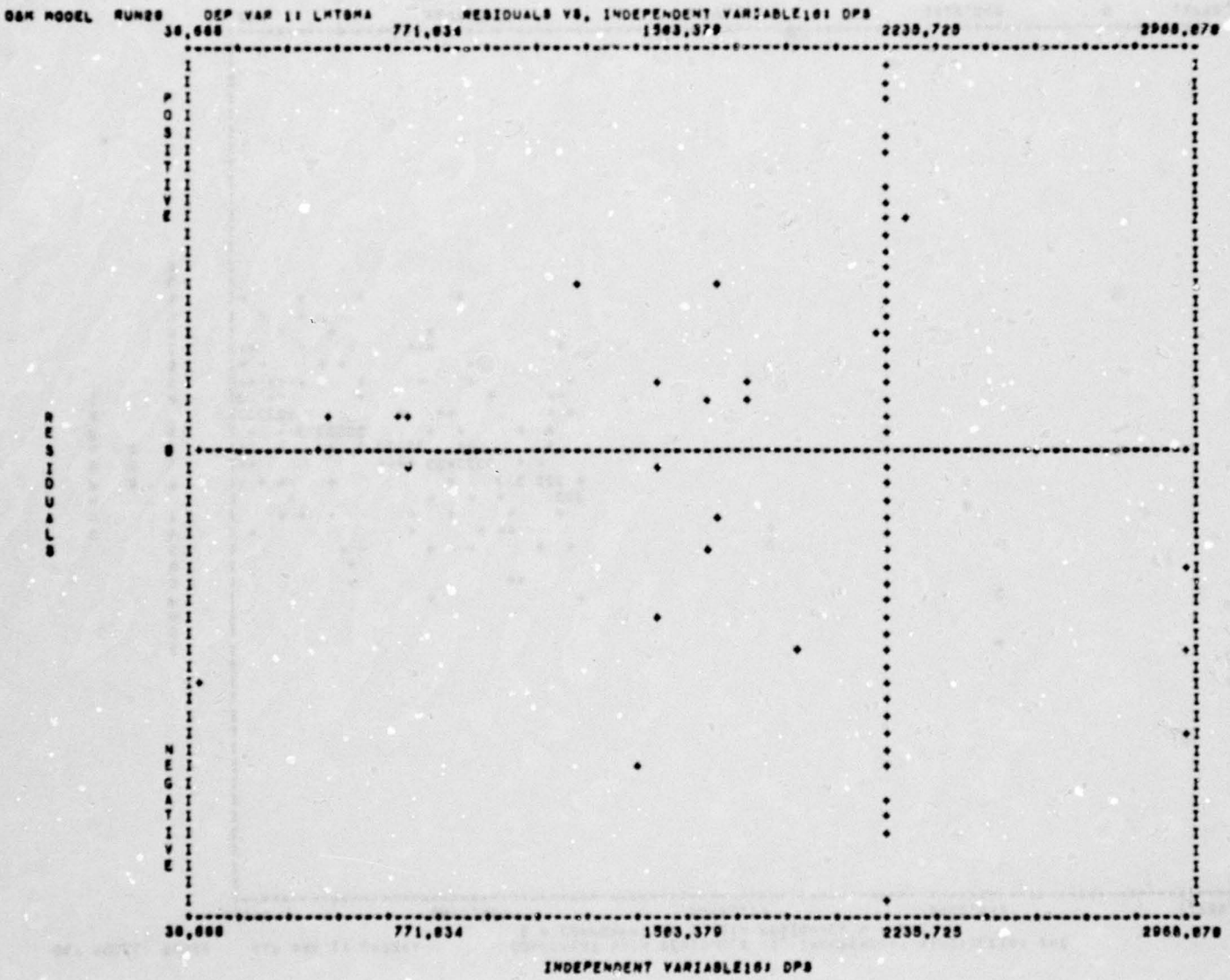

D&M MODEL RUN28 DEP VAR 1: LMTSMA RESIDUALS VS. INDEPENDENT VARIABLE14: DVO
2384.000
POSITIVE
RESIDUALS
0
NEGATIVE
2384.000
INDEPENDENT VARIABLE14: DVO

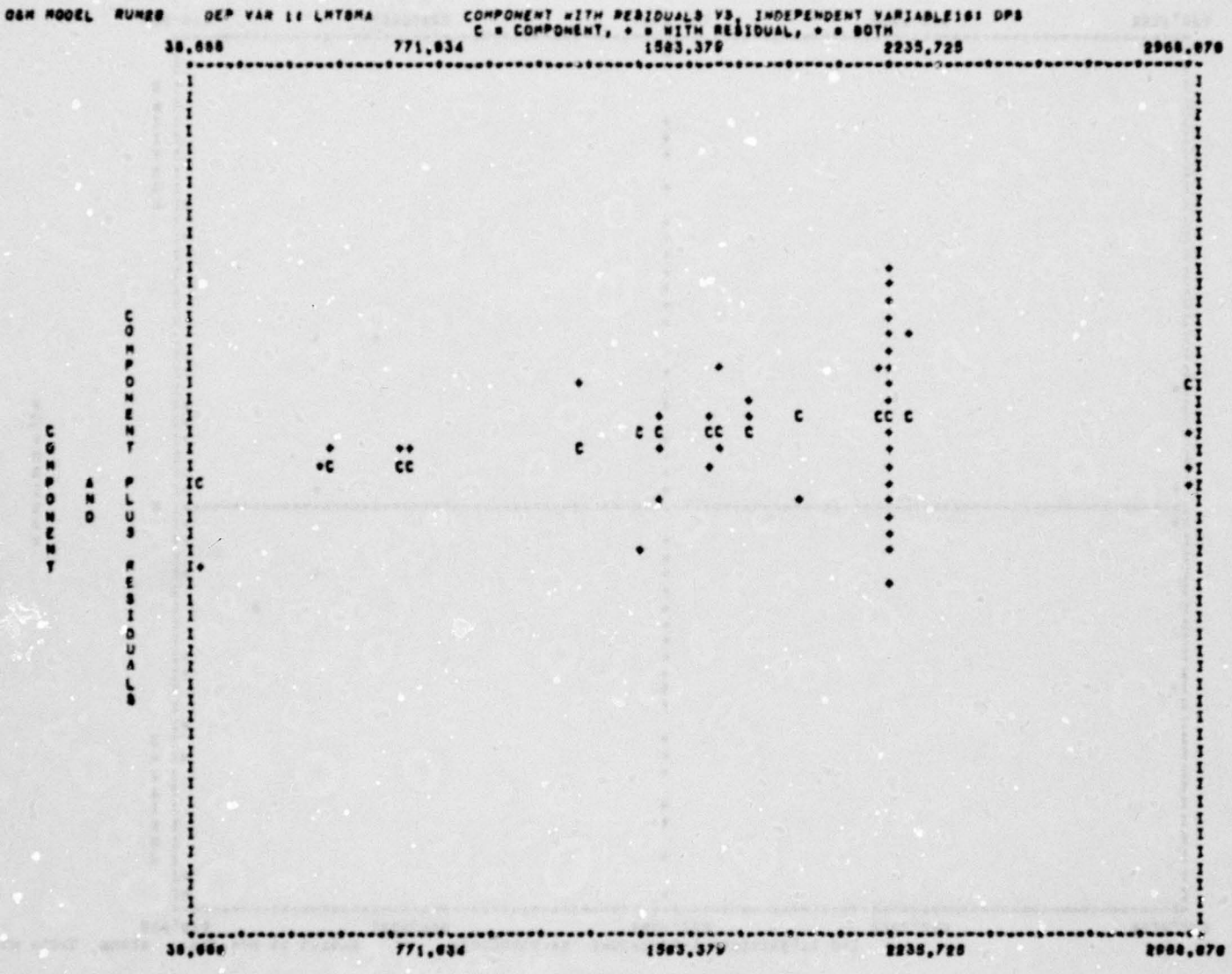


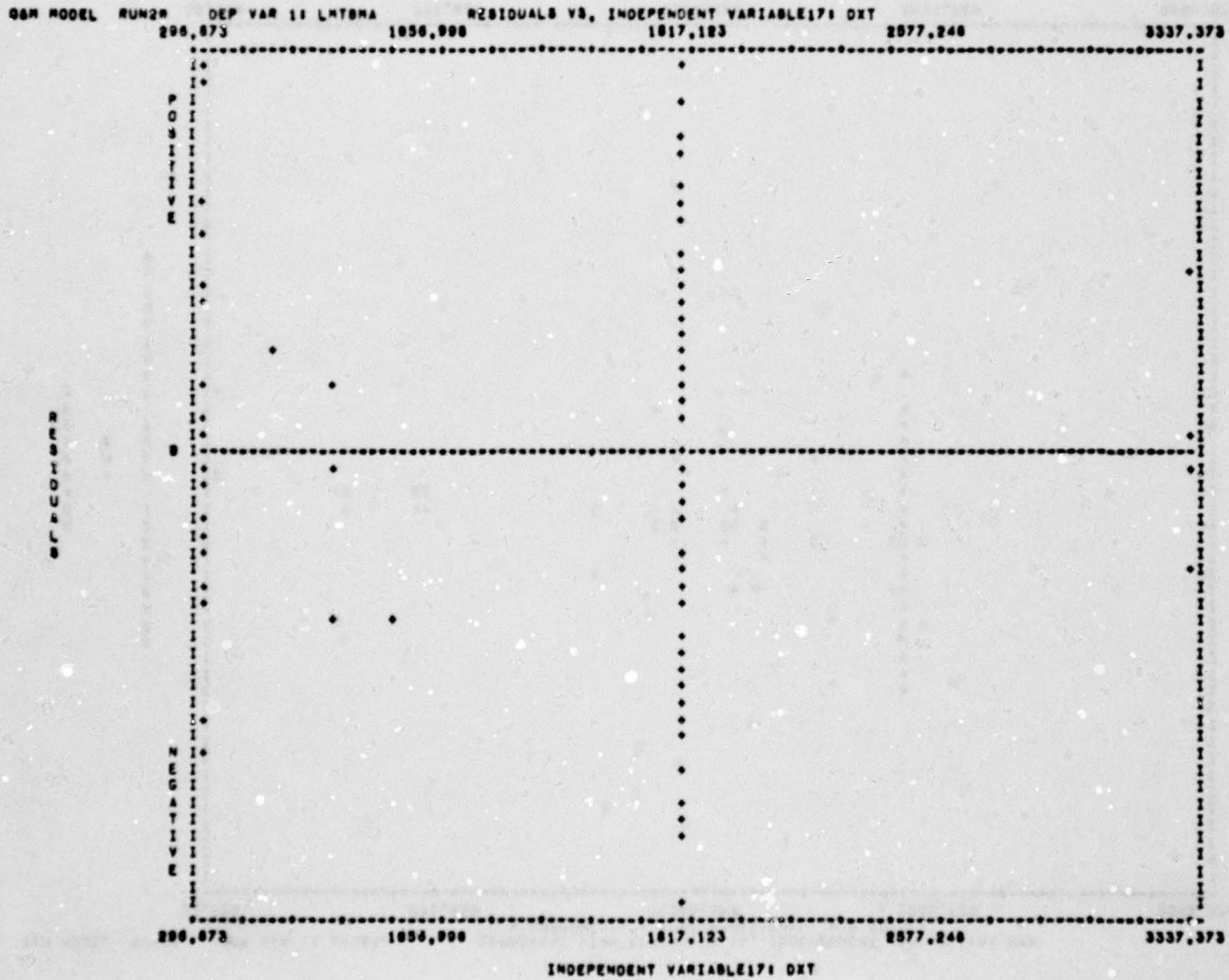
0 RESIDUALS OUTSIDE OF PLOT

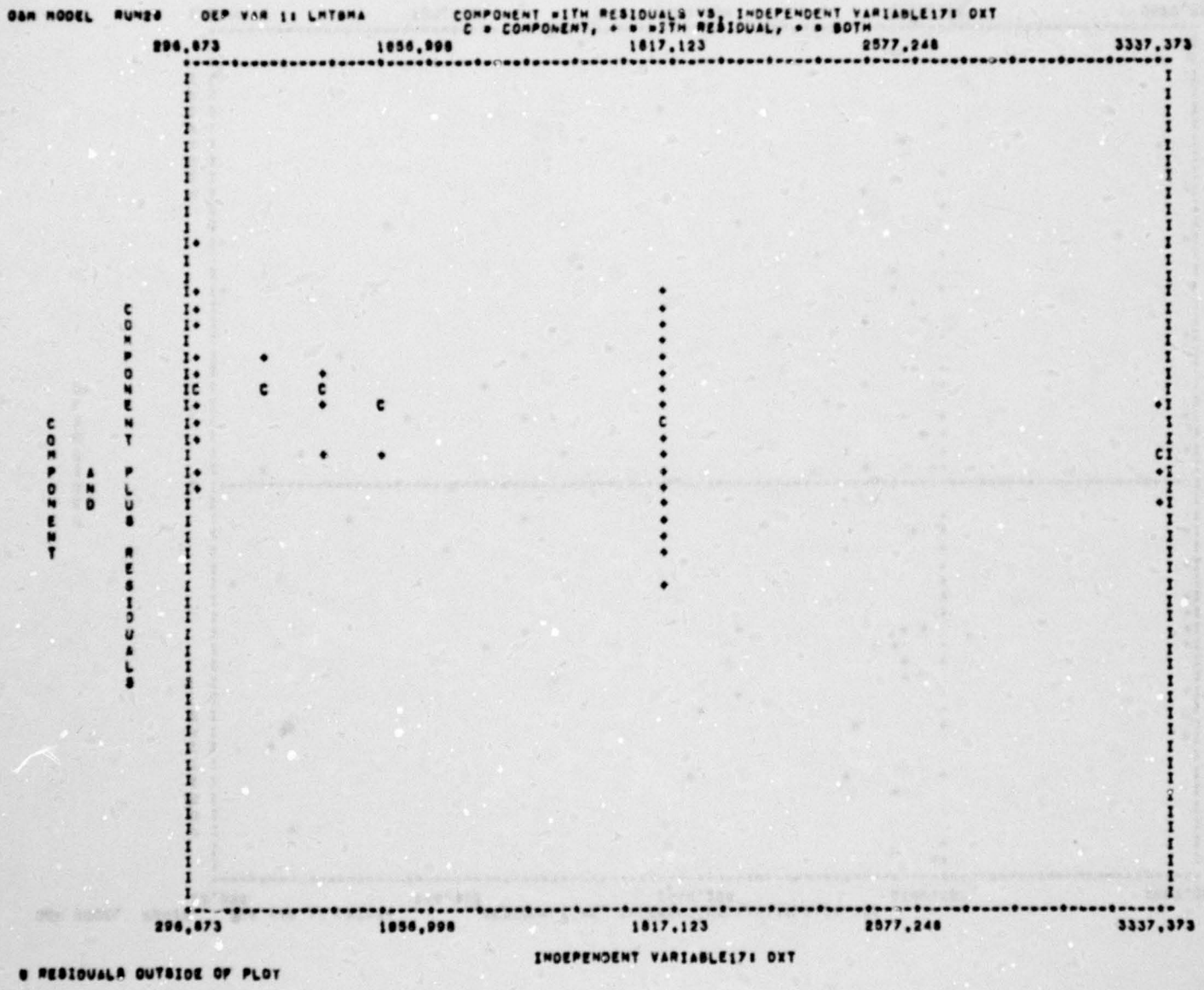

O&M MODEL RUN28 DEP VAR IS LN(O&M) RESIDUALS VS. INDEPENDENT VARIABLE(S): DHT
3,686
2948,485
5877,123
8813,842
11750,560
POSITIVE
RESIDUALS
0
NEGATIVE
INDEPENDENT VARIABLE(S): DHT

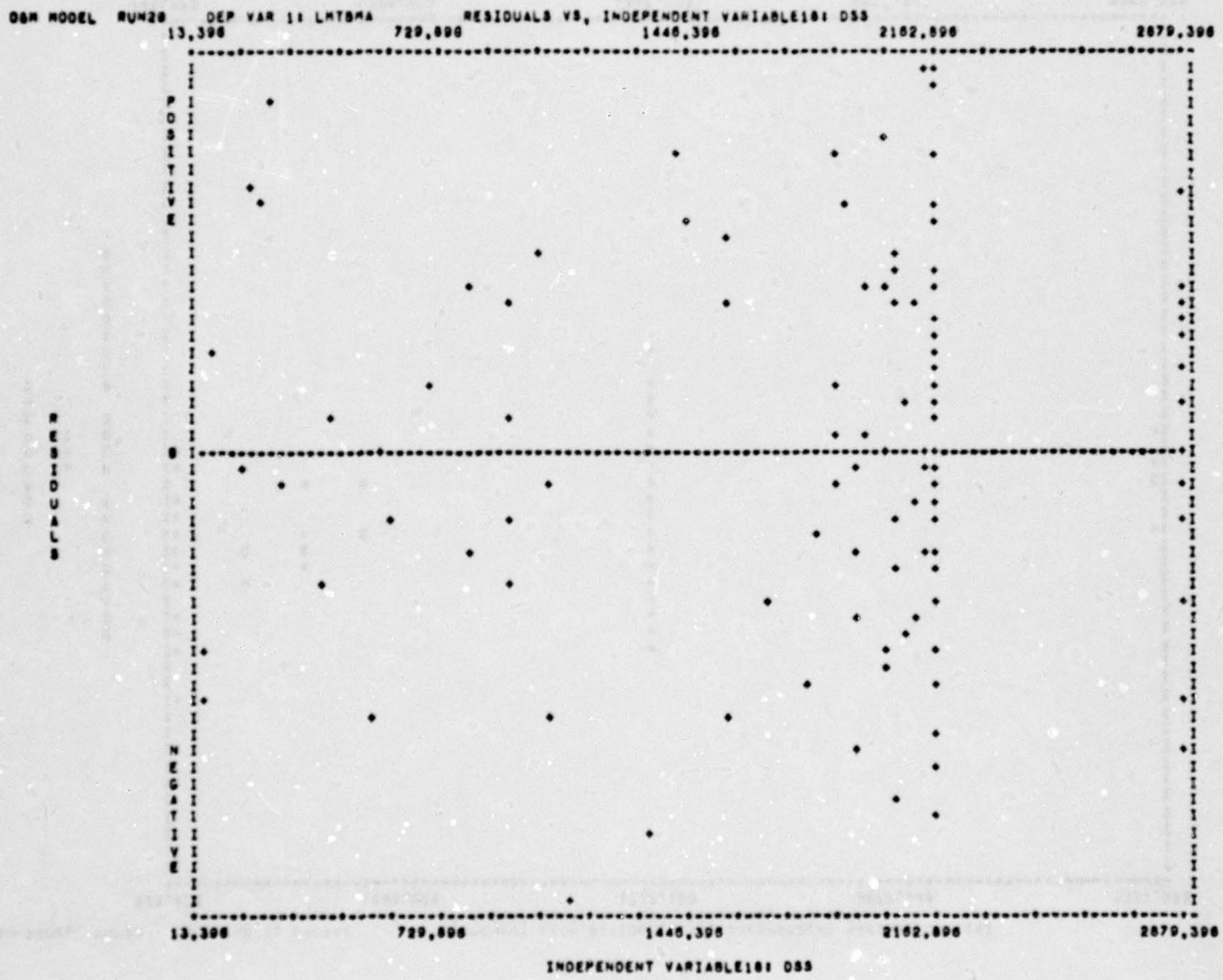

GSM MODEL RUN20 DEP VAR 1: LNTSMA
COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE15: DNT
C = COMPONENT, > = WITH RESIDUAL, * = BOTH
3,686
2948,405
5877,123
8813,842
11750,560
COMPONENT AND COMPONENT PLUS RESIDUALS
INDEPENDENT VARIABLE15: DNT
0 RESIDUALS OUTSIDE OF PLOT

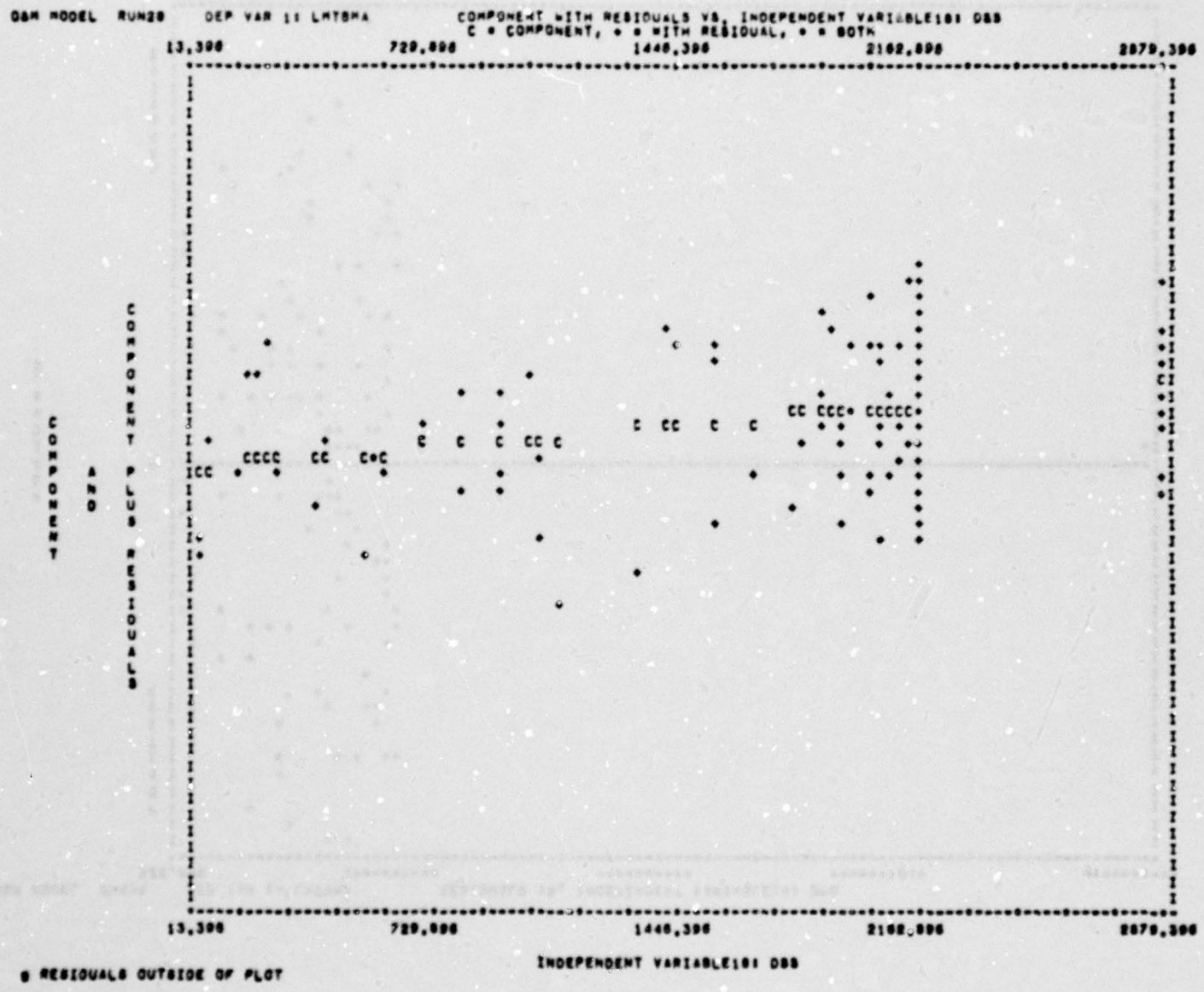

BSK MODEL RUN28 DEP VAR IS LNTSMA RESIDUALS VS. INDEPENDENT VARIABLE(S) DPS
38,688
771,834
1503,379
2235,725
2968,070
POSITIVE
RESIDUALS
0
NEGATIVE
INDEPENDENT VARIABLE(S) DPS

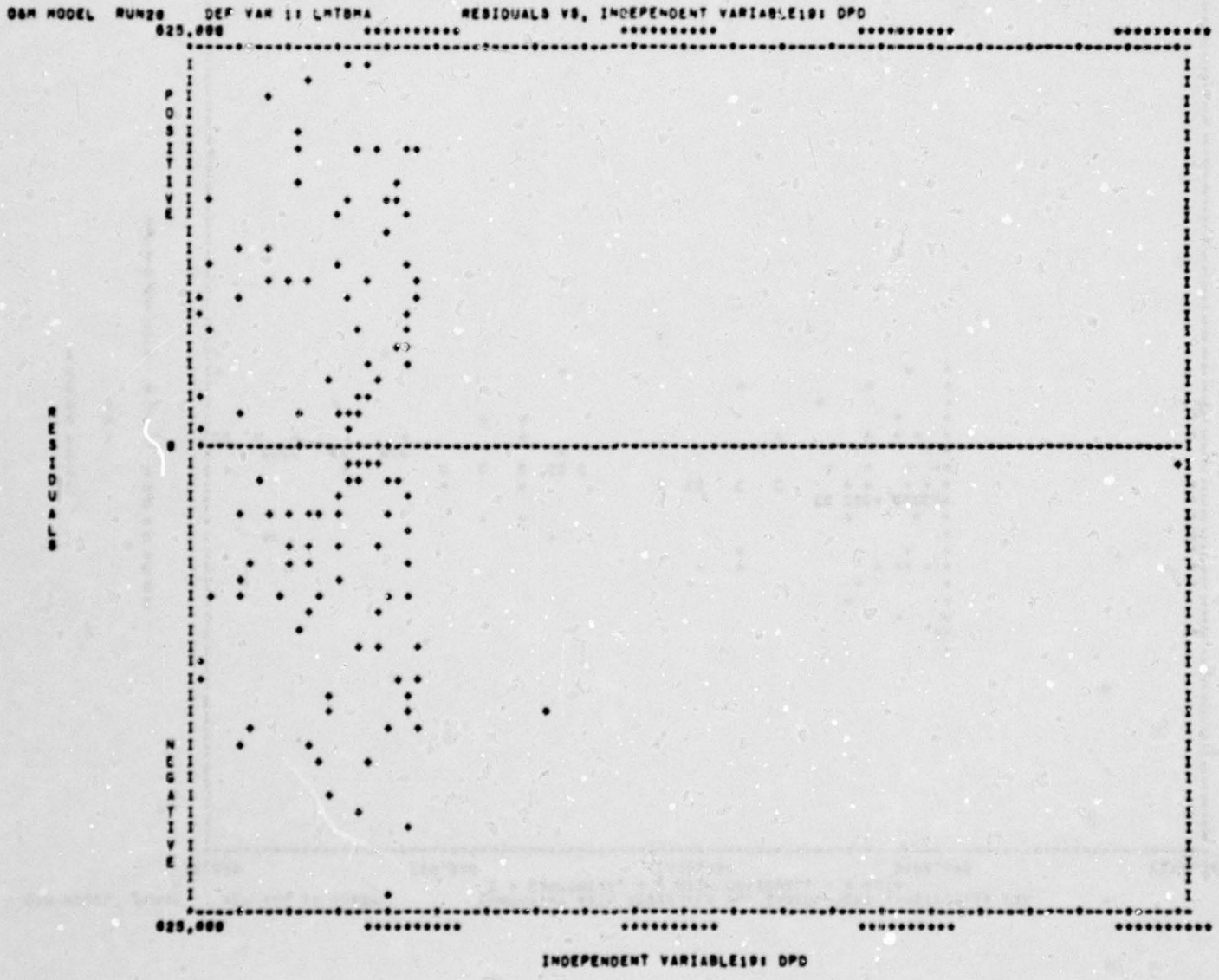

O&M MODEL RUN28 DEP VAR IS LMTBMA COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE161 OPS
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
38,688
771,634
1503,379
2235,725
2968,070
COMPONENT PLUS RESIDUALS
COMPONENT AND
INDEPENDENT VARIABLE161 OPS
0 RESIDUALS OUTSIDE OF PLOT

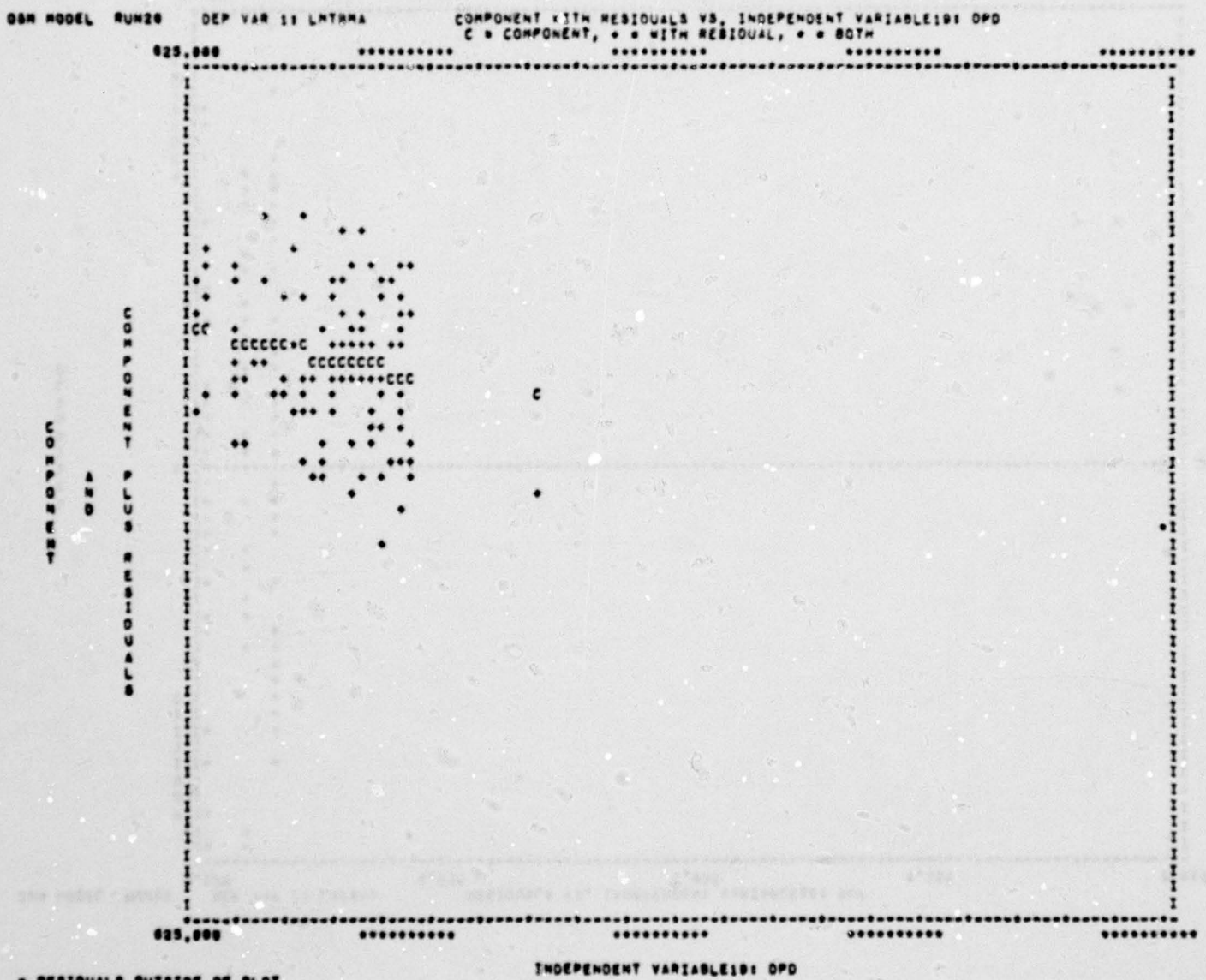

G&M MODEL RUN2R DEP VAR 1: LNTSMA RESIDUALS VS. INDEPENDENT VARIABLE17: DXT
296,873
1056,998
1817,123
2577,248
3337,373
POSITIVE
0
NEGATIVE
RESIDUALS
INDEPENDENT VARIABLE17: DXT


G&M MODEL RUN20 DEP VAR 1: LMTBMA COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE17: DXT
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
296,873
1856,998
1817,123
2577,248
3337,373
COMPONENT PLUS RESIDUALS
AND
COMPONENT
INDEPENDENT VARIABLE17: DXT
0 RESIDUALS OUTSIDE OF PLOT

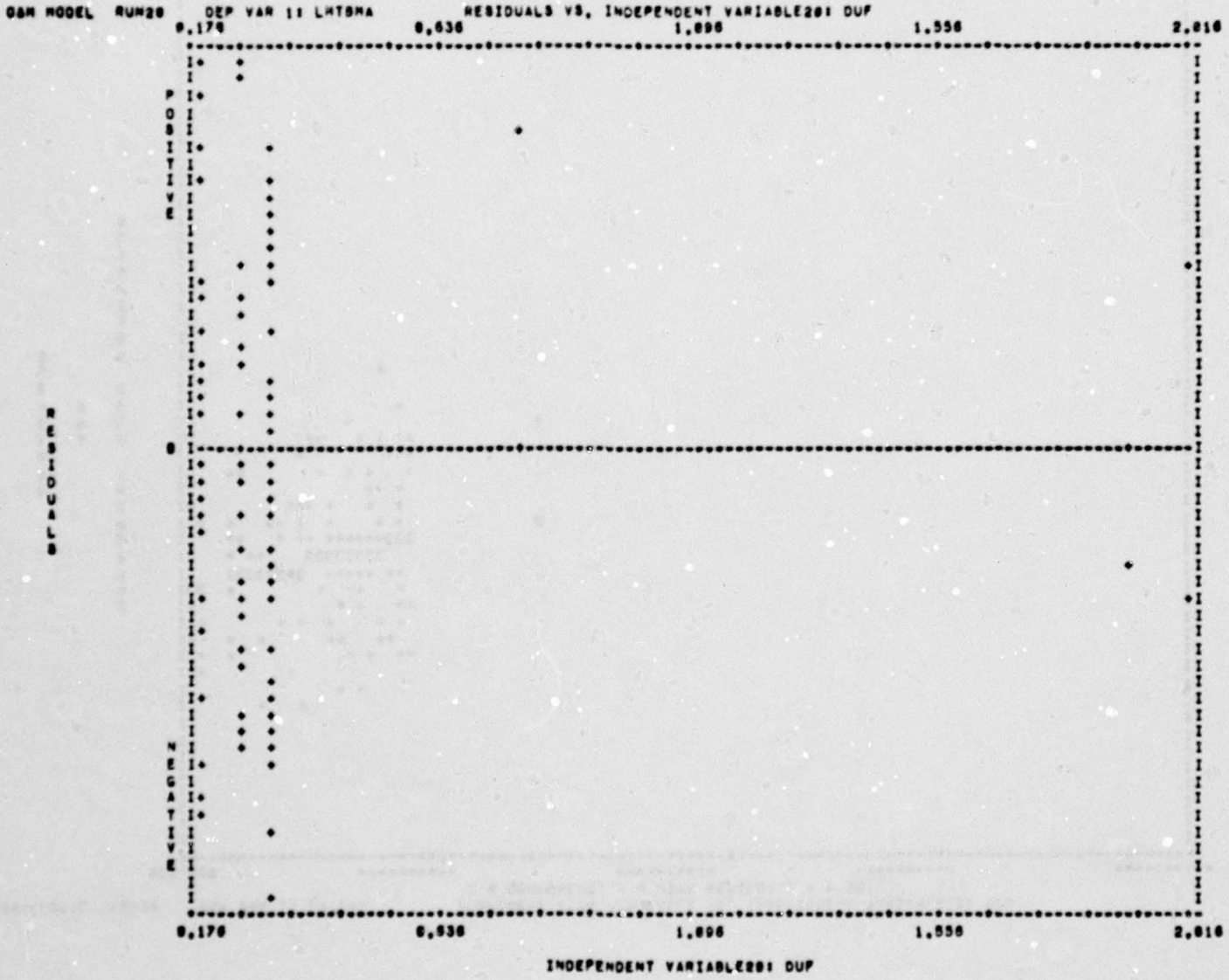

OSM MODEL RUN28 DEP VAR 1: LMTSMA RESIDUALS VS. INDEPENDENT VARIABLE16: DS3
13,396
729,896
1446,396
2162,896
2879,396
POSITIVE
RESIDUALS
0
NEGATIVE
INDEPENDENT VARIABLE16: DS3

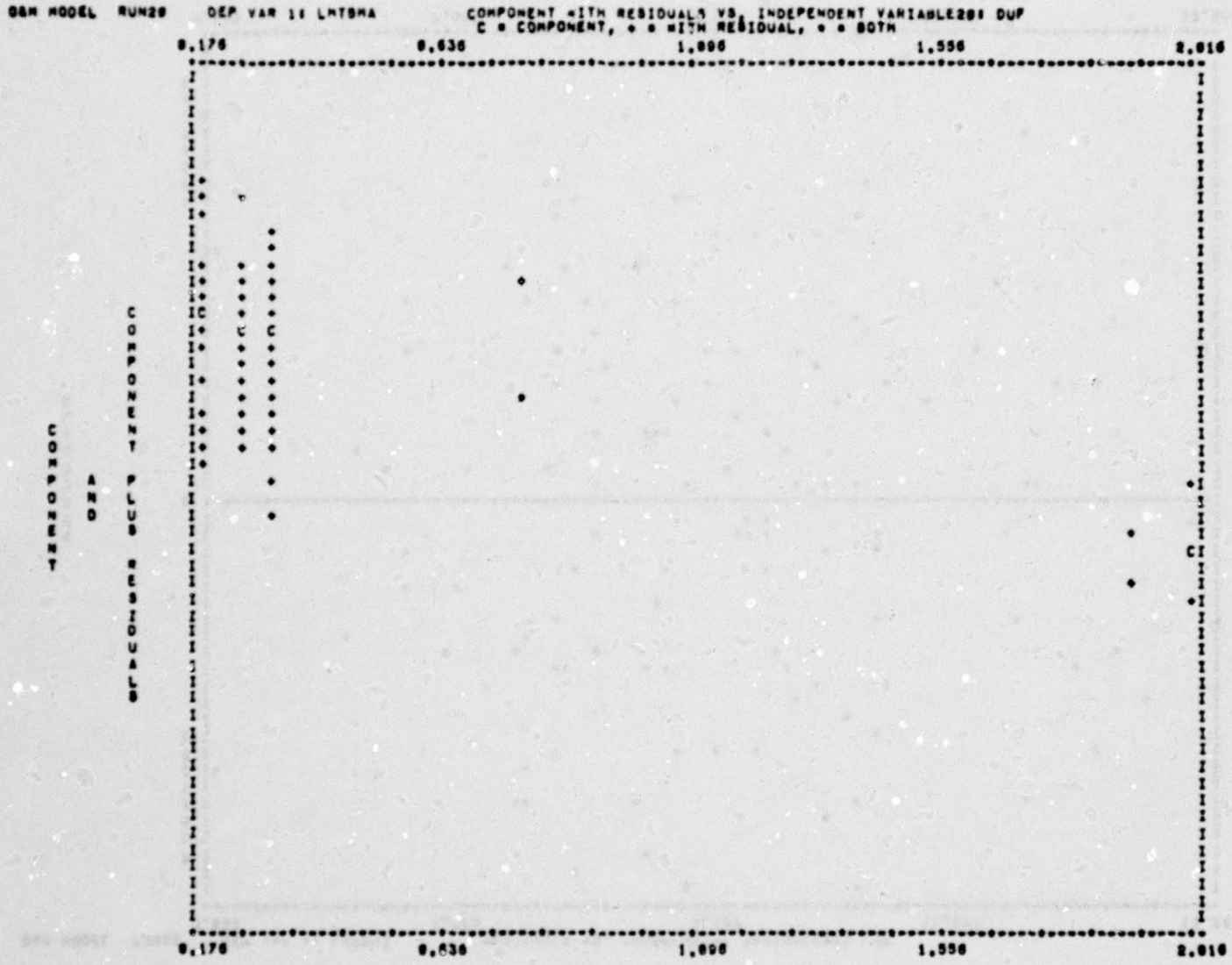

O&M MODEL RUN28 DEP VAR 11 LMTSMA
COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE101 O&S
C = COMPONENT, * = WITH RESIDUAL, + = BOTH
13,396
729,896
1446,396
2162,896
2879,396
COMPONENT AND COMPONENT PLUS RESIDUALS
INDEPENDENT VARIABLE101 O&S
0 RESIDUALS OUTSIDE OF PLOT

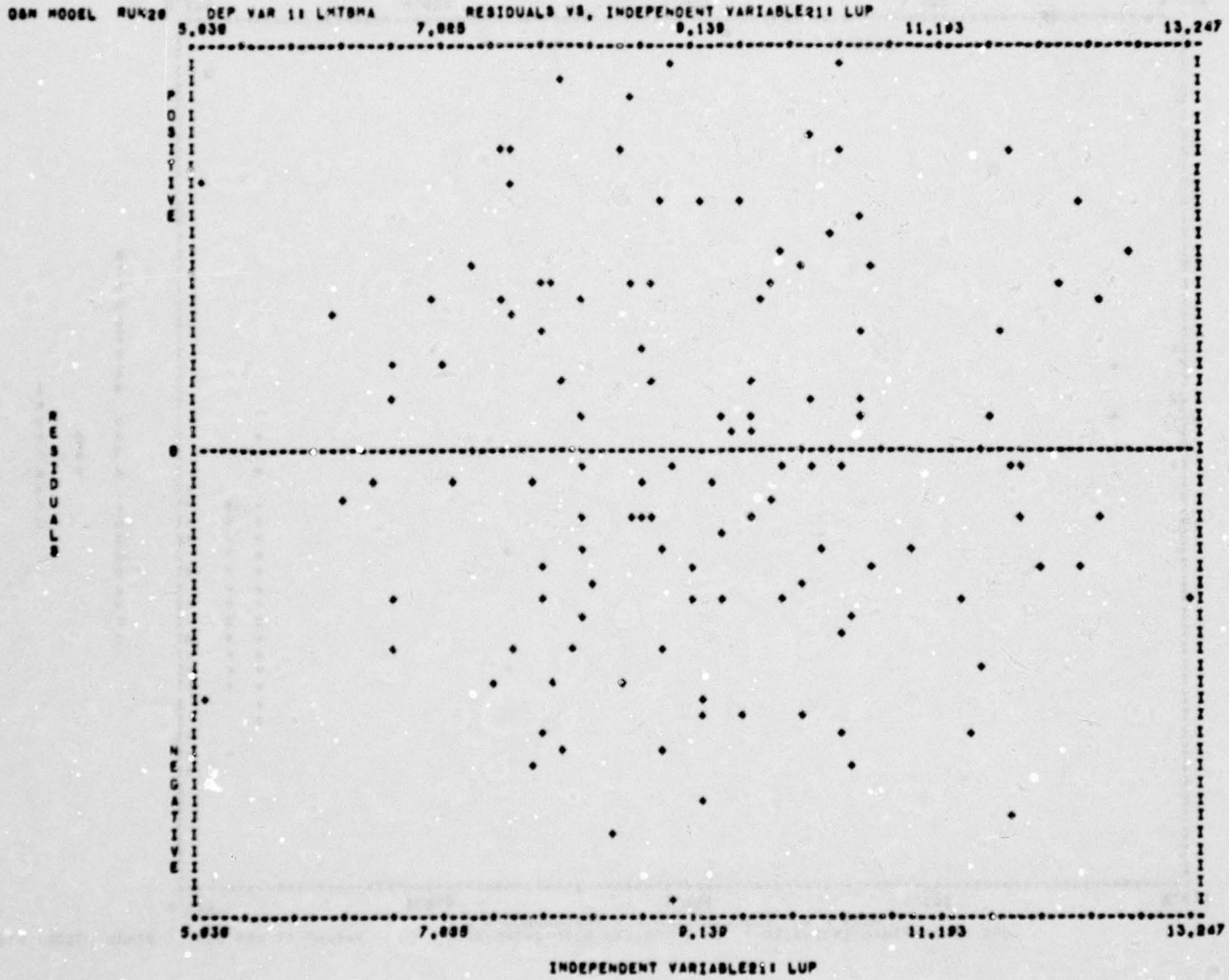

G&M MODEL RUN28 DEF VAR 1: LMTBMA RESIDUALS VS, INDEPENDENT VARIABLE19: DPD
625.000
POSITIVE
0
NEGATIVE
625.000
RESIDUALS
INDEPENDENT VARIABLE19: DPD

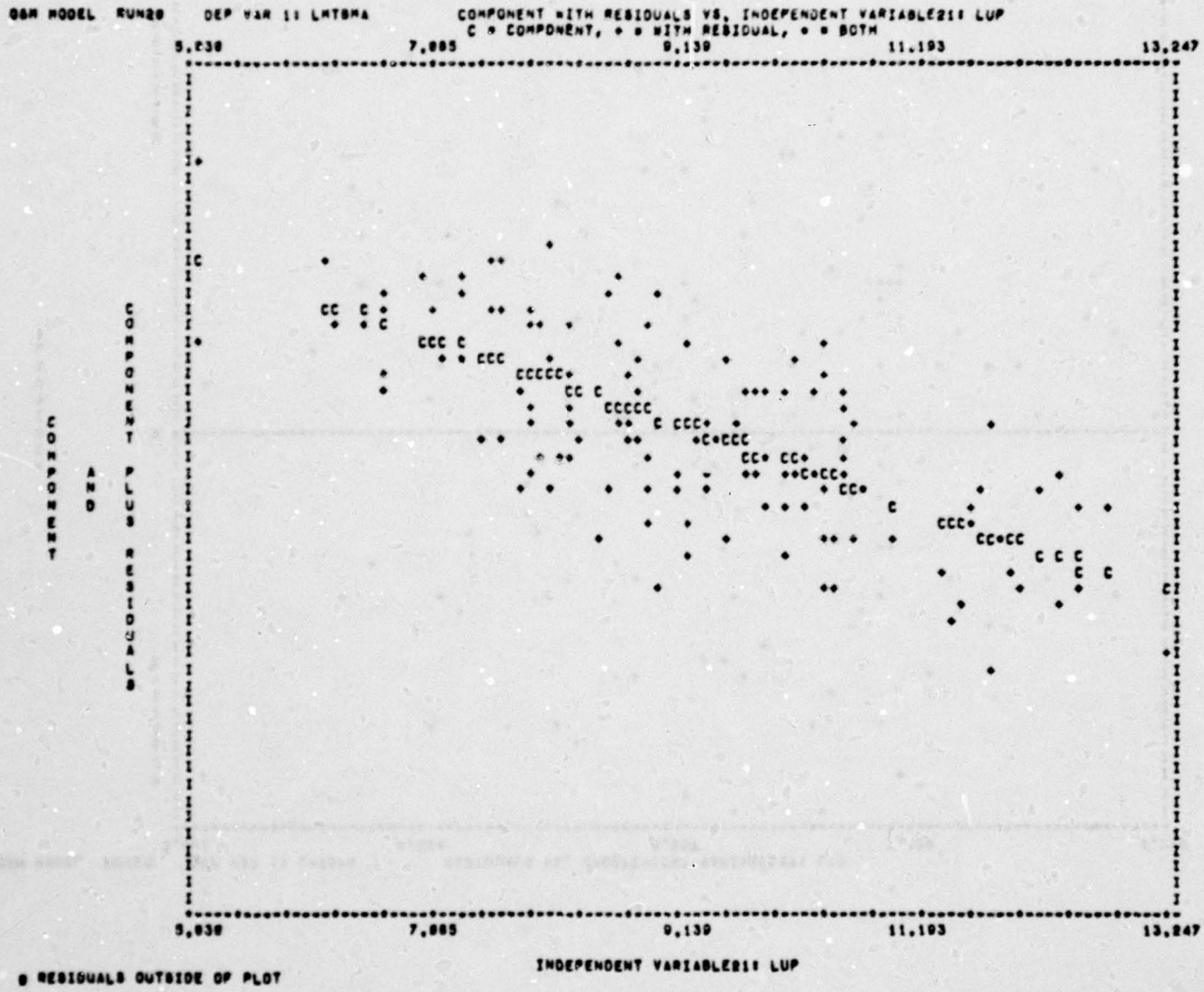


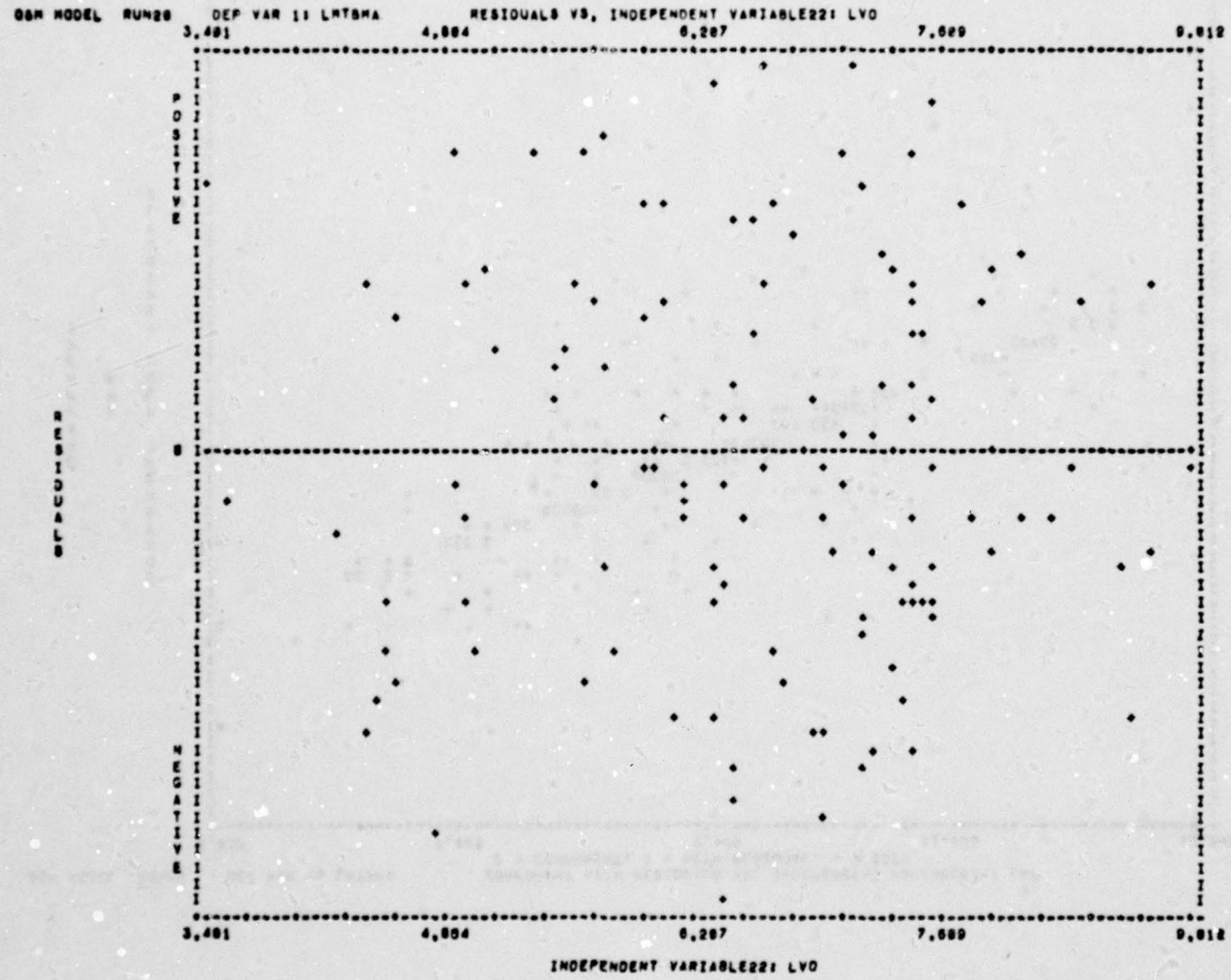
* RESIDUALS OUTSIDE OF PLOT

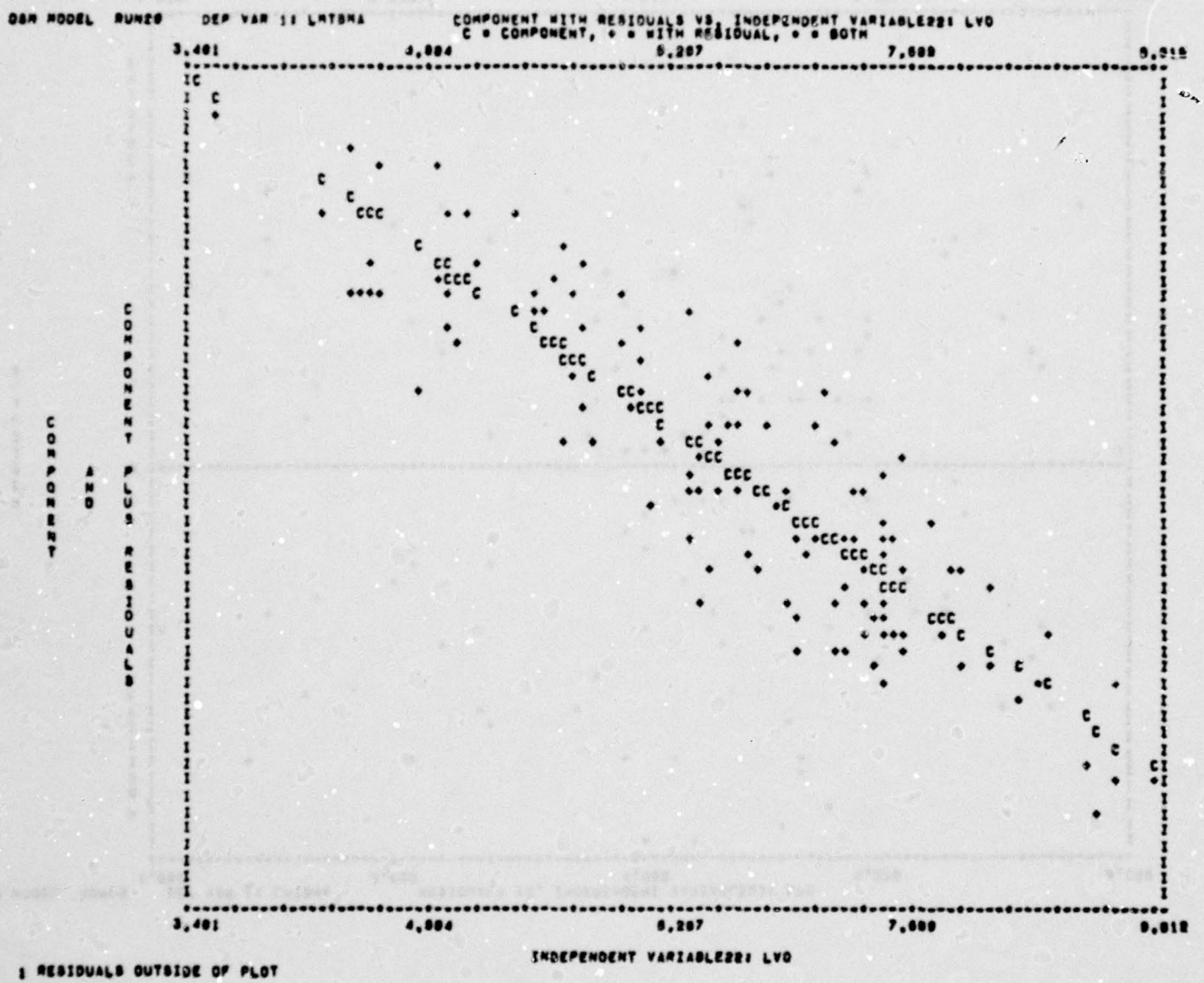

G&M MODEL RUN28 DEP VAR 1: LHTSMA RESIDUALS VS. INDEPENDENT VARIABLE28: DUF
0.176
0.636
1.096
1.556
2.016
POSITIVE RESIDUALS
0
NEGATIVE
INDEPENDENT VARIABLE28: DUF


G&M MODEL RUN28 DEP VAR IS LMTSMA COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE28: DUP
C = COMPONENT, * = WITH RESIDUAL, @ = BOTH
0.176
0.636
1.096
1.556
2.016
COMPONENT AND COMPONENT PLUS RESIDUALS
INDEPENDENT VARIABLE28: DUP
0 RESIDUALS OUTSIDE OF PLOT

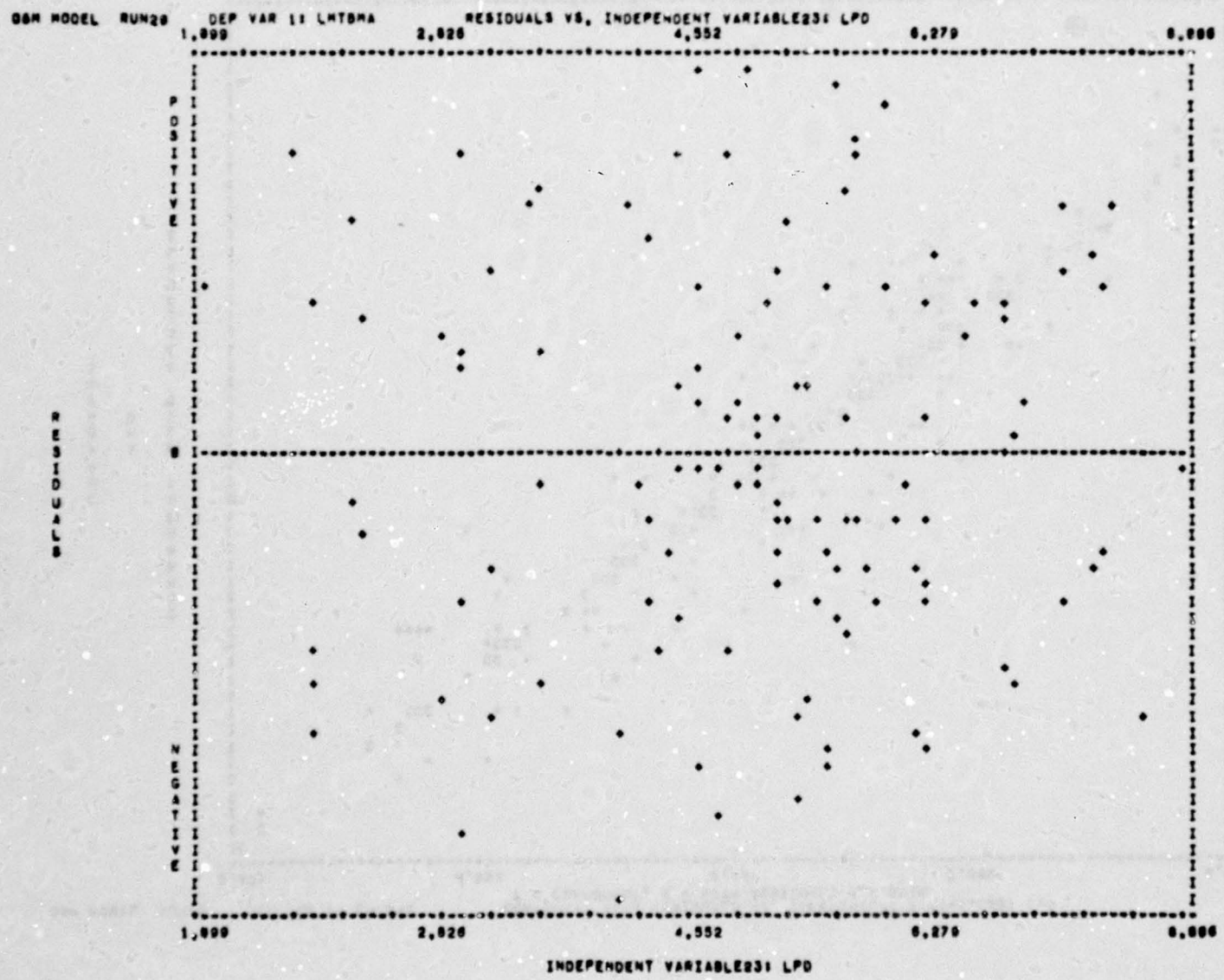

GBH MODEL RUN20 DEP VAR 11 LMTBMA RESIDUALS VS, INDEPENDENT VARIABLE21 LUP
5,038
7,088
9,139
11,193
13,247
POSITIVE
RESIDUALS
0
NEGATIVE
INDEPENDENT VARIABLE21 LUP

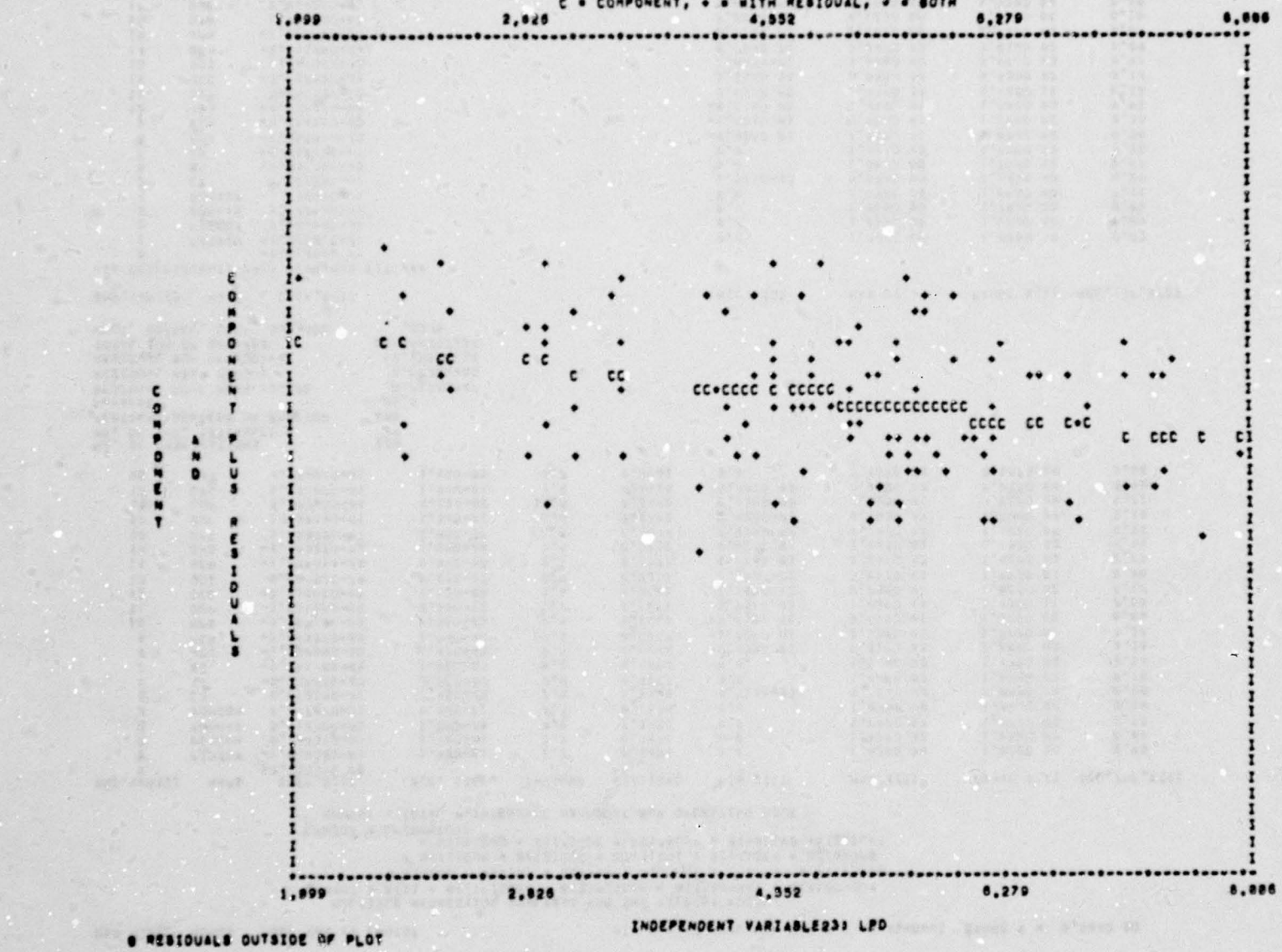

GSM MODEL RUN20 DEP VAR 11 LMTBMA
COMPONENT WITH RESIDUALS VS, INDEPENDENT VARIABLE21: LUP
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
5,238
7,885
9,139
11,193
13,247
COMPONENT AND COMPONENT PLUS RESIDUALS
INDEPENDENT VARIABLE21: LUP
0 RESIDUALS OUTSIDE OF PLOT


GSM MODEL RUN28 DEP VAR 1: LMTSMA RESIDUALS VS. INDEPENDENT VARIABLE22: LVO
3,481
4,884
6,287
7,689
9,812
POSITIVE
RESIDUALS
0
NEGATIVE
INDEPENDENT VARIABLE22: LVO



1 RESIDUALS OUTSIDE OF PLOT


GSM MODEL RUN20 DEP VAR 1: LMTBMA RESIDUALS VS. INDEPENDENT VARIABLE23: LPD
1,899
2,826
4,552
6,279
8,006
POSITIVE
0
NEGATIVE
RESIDUALS
INDEPENDENT VARIABLE23: LPD


O&M MODEL RUN28 DEP VAR 1: LNTBM4
COMPONENT WITH RESIDUALS VS. INDEPENDENT VARIABLE23: LPD
C = COMPONENT, + = WITH RESIDUAL, * = BOTH
1,999
2,826
4,352
6,279
8,886
COMPONENT AND COMPONENT PLUS RESIDUALS
INDEPENDENT VARIABLE23: LPD
0 RESIDUALS OUTSIDE OF PLOT

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN38 DEP VAR IS LMHTOT MIN Y = -7.8980 00 MAX Y = -5.4590-01 RANGE Y = 6.8440 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPOS" MODEL

LMHTOT = B(0) + B(1)FIGSEN + B(2)FIGCOM + B(3)BOMNAV + B(4)BOMCOM
+ B(5)CO + B(6)XT + B(7)SS + B(8)MDI + B(9)MEM + B(10)MPS
+ B(11)DUP + B(12)DCC + B(13)DDI + B(14)DEM + B(15)DPS
+ B(16)DPD + B(17)DUP + B(18)LUP + B(19)LVO +B(20)LMT

LMHTOT = LN(MMHTOT)

MMHTOT = TOTAL MAINTENANCE MANHOURS PER OPERATING HOUR

IND,VAR(I)	NAME	COEF,B(I)	S.E. COEF,	T-VALUE	R(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL,INF,X(I)
0		-9.758060 00							
1	FIGSEN	-1.889560-01	1.960-01	1.0	0.3389	0.0	1.0000 00	1.0000 00	0.03
2	FIGCOM	5.493310-01	1.780-01	3.2	0.2842	0.0	1.0000 00	1.0000 00	0.09
3	BOMNAV	5.117460-01	1.290-01	4.2	0.2482	0.0	1.0000 00	1.0000 00	0.08
4	BOMCOM	8.777820-01	1.580-01	4.3	0.1598	0.0	1.0000 00	1.0000 00	0.10
5	CO	2.573150-01	3.950-02	6.5	0.3799	4.9230-03	6.6590 00	6.6590 00	0.26
6	XT	-5.336710-03	2.660-03	2.0	0.4727	0.0	1.0000 02	1.0000 02	0.06
7	SS	-1.581780-02	1.920-03	8.2	0.6892	0.0	1.0000 02	1.0000 02	0.24
8	MDI	-1.329890-02	1.420-03	9.3	0.5154	-2.4990 01	7.5190 01	1.0000 02	0.28
9	MEM	-2.488550-02	2.350-03	10.5	0.6057	-1.9280 01	8.9890 01	1.0000 02	0.38
10	MPS	-4.187130-03	2.860-03	2.0	0.1513	-5.8190 00	9.4990 01	1.0000 02	0.06
11	DUP	2.881850-12	2.540-12	1.1	0.1871	3.6910 05	1.4360 11	1.4360 11	0.06
12	DCC	-3.725850-08	1.150-08	3.3	0.2785	7.2990 02	2.8560 07	2.8560 07	0.16
13	DDI	1.869520-04	6.610-05	2.5	0.2259	1.6800-01	3.8910 03	3.8910 03	0.06
14	DEM	-1.867810-04	6.640-05	2.7	0.1977	2.7940 01	3.8470 03	3.8220 03	0.09
15	DPS	-1.763870-04	1.080-04	1.6	0.2752	9.4280 01	2.8830 03	2.7880 03	0.06
16	DPD	1.933220-07	1.250-07	1.6	0.3844	7.2990 02	4.1490 06	4.1080 06	0.12
17	DUP	3.299880-01	1.340-01	2.4	0.1582	2.8250-01	2.1030 00	1.9880 00	0.10
18	LUP	5.623650-01	4.120-02	13.6	0.6992	9.8380 00	1.3250 01	0.2170 00	0.71
19	LVO	1.833870-01	1.910-01	1.0	0.0014	3.4810 00	9.6120 00	5.6110 00	0.10
20	LMT	4.037810-01	1.090-01	3.7	0.0841	0.0	5.1570 00	5.1570 00	0.32

NO. OF OBSERVATIONS	138
NO. OF IND. VARIABLES	20
RESIDUAL DEGREES OF FREEDOM	109
F-VALUE	65.5
RESIDUAL ROOT MEAN SQUARE	0.41932847
RESIDUAL MEAN SQUARE	0.17583489
RESIDUAL SUM OF SQUARES	19.16598138
TOTAL SUM OF SQUARES	249.59267129
MULT. CORREL. COEF. SQUARED	.9232

IND,VAR(I)	NAME	COEF,B(I)	MIN X(I)	MAX X(I)	RANGE X(I)	REL,INF,X(I)
*** COEFFICIENTS FROM PREVIOUS FIT ***						
0		-1.814220 01				
1	FIGSEN	-1.992810-01	0.0	1.0000 00	1.0000 00	0.03
2	FIGCOM	5.946240-01	0.0	1.0000 00	1.0000 00	0.09
3	BOMNAV	5.777580-01	0.0	1.0000 00	1.0000 00	0.09
4	BOMCOM	7.132410-01	0.0	1.0000 00	1.0000 00	0.11
5	CO	2.571540-01	4.9230-03	6.6590 00	6.6590 00	0.26
6	XT	-4.491080-03	0.0	1.0000 02	1.0000 02	0.07
7	SS	-1.637270-02	0.0	1.0000 02	1.0000 02	0.25
8	MDI	-1.315870-02	-2.4990 01	7.5190 01	1.0000 02	0.28
9	MEM	-2.484210-02	-1.9280 01	8.9890 01	1.0000 02	0.38
10	MPS	-4.238870-03	-5.8190 00	9.4990 01	1.0000 02	0.06
11	DUP	5.866320-12	3.6910 05	1.4360 11	1.4360 11	0.13
12	DCC	-3.167740-08	7.2990 02	2.8560 07	2.8560 07	0.14
13	DDI	1.492970-04	1.6800-01	3.8910 03	3.8910 03	0.07
14	DEM	-2.012490-04	2.7940 01	3.8470 03	3.8220 03	0.09
15	DPS	-1.823140-04	9.4280 01	2.8830 03	2.7880 03	0.07
16	DPD	1.897620-07	7.2990 02	4.1490 06	4.1080 06	0.12
17	DUP	3.014280-01	2.8250-01	2.1030 00	1.9880 00	0.10
18	LUP	5.981230-01	9.8380 00	1.3250 01	0.2170 00	0.78
19	LVO	1.883790-01	3.4810 00	9.6120 00	5.6110 00	0.10
20	LMT	3.789540-01	0.0	5.1570 00	5.1570 00	0.30

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

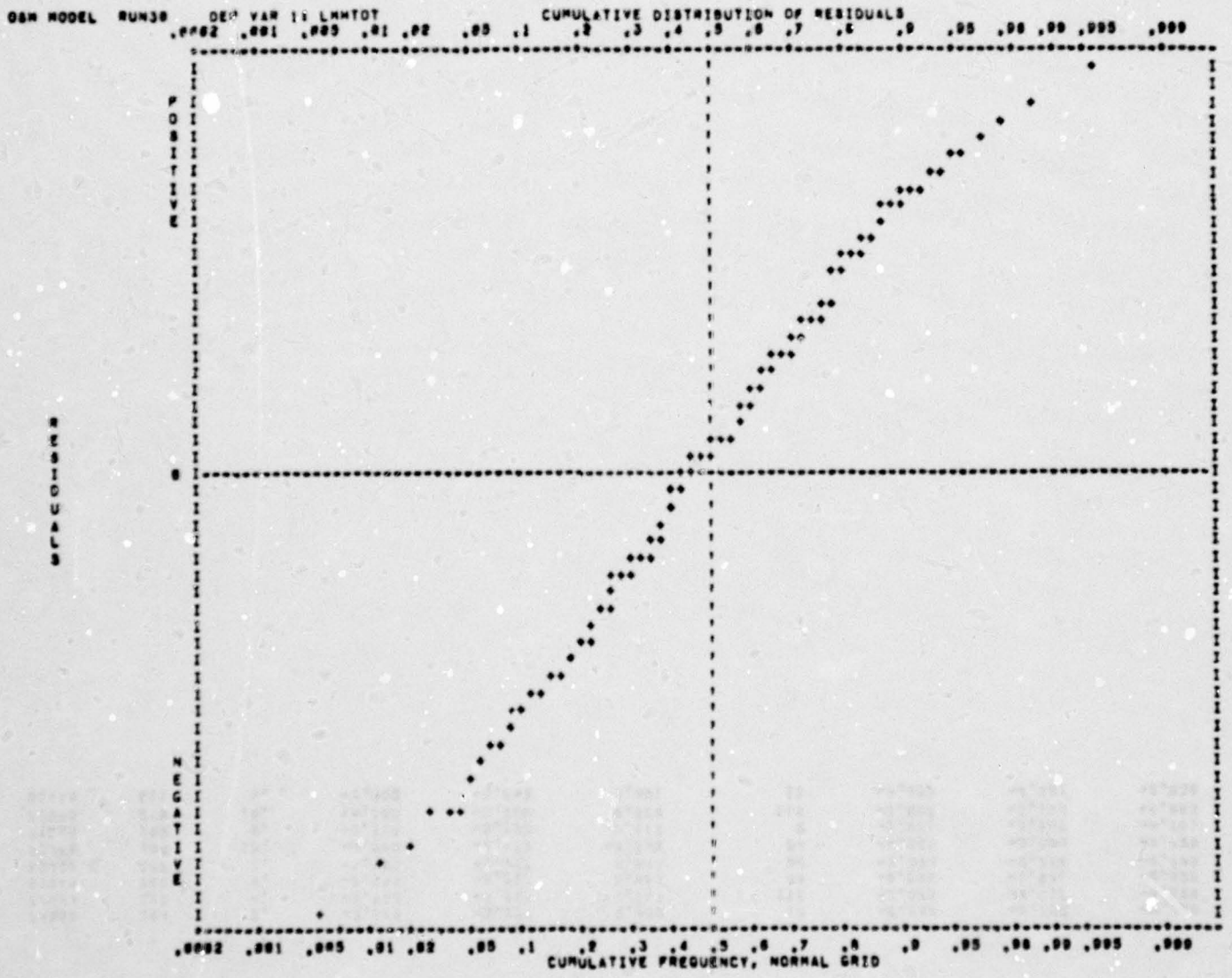
D&M MODEL RUN38 DEP VAR IS LMHTOT

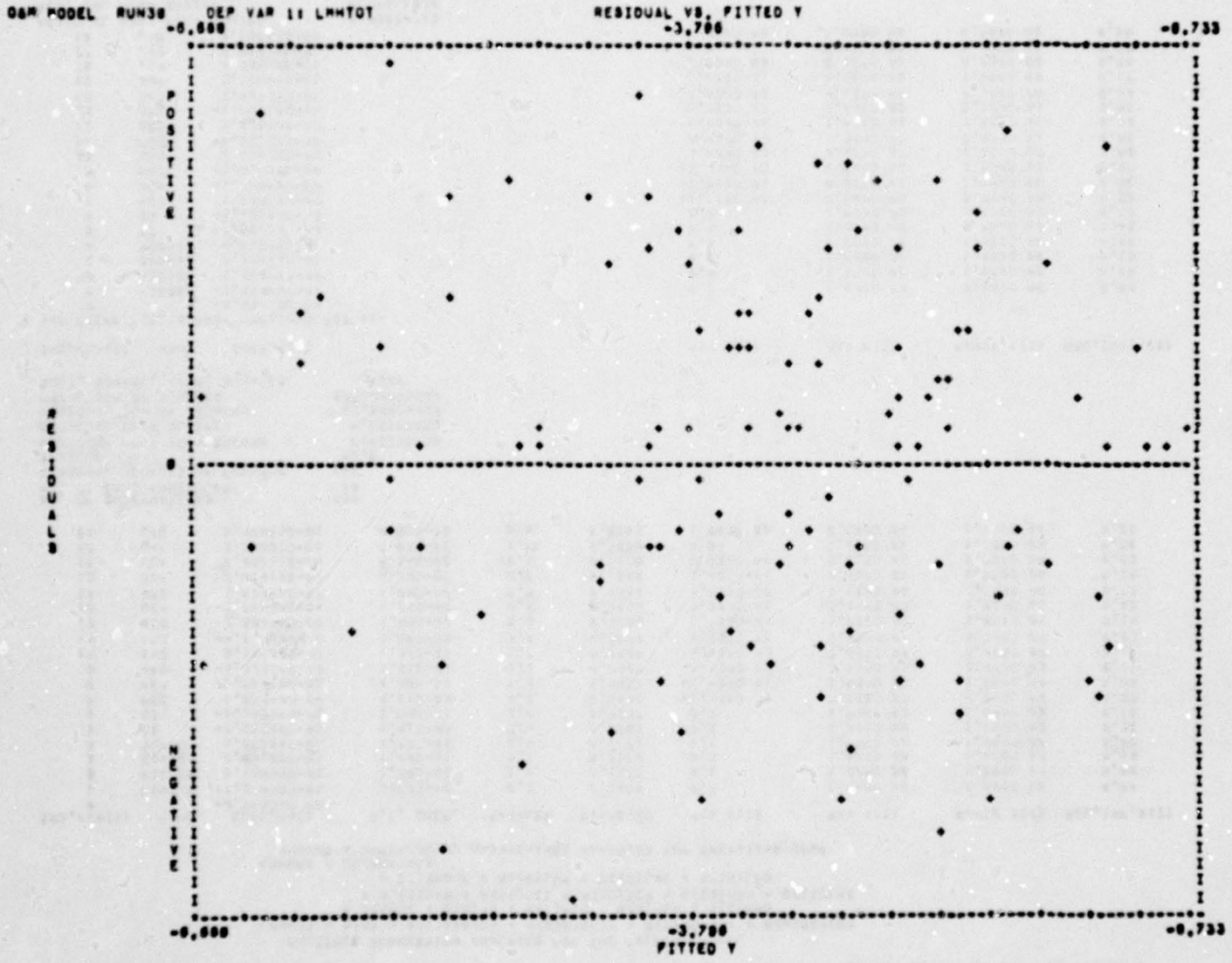
RESIDUAL ROOT MEAN SQUARE	.42611126
RESIDUAL MEAN SQUARE	.18157868
RESIDUAL SUM OF SQUARES	19.79121759
TOTAL SUM OF SQUARES	249.59267129
MULT. CORREL. COEF. SQUARED	.9206

ORDERED BY COMPUTER INPUT						ORDERED BY RESIDUALS				
IDENT,	OBSV,	MSB DISTANCE	OBS, Y	FITTED Y	RESIDUAL	OBSV,	OBS, Y	FITTED Y	ORDERED RESID,	SEQ
71B2B	1	1,	-3.385	-3.171	-0.213	218	-4.565	-5.439	0.874	1
71L8B	2	6,	-2.971	-2.208	-0.763	13	-3.782	-3.992	0.798	2
71M6B	3	23,	-2.855	-3.087	0.233	58	-5.499	-6.254	0.756	3
71PKB	4	2,	-3.899	-3.899	0.000	25	-1.978	-1.769	0.699	4
71P8B	5	7,	-3.687	-3.528	-0.117	84	-4.566	-1.231	0.685	5
71718	6	19,	-5.661	-5.985	0.325	289	-2.618	-3.292	0.673	6
724GB	7	14,	-6.023	-5.677	-0.346	221	-2.289	-2.926	0.638	7
71PAB	9	4,	-3.870	-3.899	0.024	63	-0.989	-2.721	0.632	8
71P8B	10	16,	-3.992	-3.963	-0.029	44	-1.947	-2.552	0.605	9
71CAB	11	4,	-5.328	-4.391	-0.938	119	-1.691	-2.189	0.598	10
71DAB	12	4,	-3.344	-2.753	-0.598	74	-4.187	-4.785	0.598	11
51EAB	13	5,	-3.282	-3.992	0.798	14	-3.314	-3.983	0.588	12
52AA0	14	7,	-3.314	-3.903	0.588	188	-4.585	-5.091	0.587	13
52A80	15	10,	-3.322	-3.625	0.303	28	-3.718	-4.283	0.573	14
63B00	16	11,	-5.497	-5.315	-0.182	17	-1.425	-1.964	0.548	15
714EB	17	21,	-1.425	-1.964	0.548	118	-2.911	-3.415	0.504	16
74JA0	18	5,	-2.432	-2.226	-0.206	96	-2.179	-2.681	0.502	17
74JC0	19	7,	-3.649	-3.632	-0.017	211	-3.252	-3.743	0.491	18
52GA1	20	5,	-3.718	-4.283	0.573	64	-1.943	-2.421	0.478	19
71Z40	21	5,	-4.368	-3.894	-0.474	31	-2.389	-2.859	0.468	20
73E50	24	13,	-2.218	-2.472	0.256	189	-1.498	-1.955	0.457	21
73EP0	25	24,	-1.978	-1.769	0.699	284	-3.592	-3.955	0.453	22
70MA0	26	25,	-0.793	-0.847	0.055	118	-3.722	-4.162	0.448	23
73MCP	27	14,	-1.879	-1.749	-0.130	83	-1.132	-1.566	0.434	24
73N40	28	31,	-2.380	-2.644	0.147	282	-3.275	-3.688	0.413	25
73Q90	29	11,	-2.137	-1.858	-0.279	43	-2.553	-2.911	0.358	26
73SC0	30	13,	-3.217	-3.125	-0.091	35	-4.783	-5.135	0.352	27
73K80	31	2,	-2.399	-2.859	0.458	128	-5.529	-5.881	0.341	28
73KE0	32	4,	-3.494	-2.786	-0.709	68	-2.653	-2.979	0.325	29
73KF0	33	3,	-3.908	-3.763	-0.138	6	-5.661	-5.985	0.325	30
73KK0	34	12,	-2.728	-2.919	0.189	194	-3.697	-3.428	0.324	31
75930	35	8,	-4.783	-5.535	0.352	37	-3.881	-3.329	0.319	32
74B00	36	6,	-2.739	-2.958	0.218	15	-3.392	-3.625	0.303	33
74BF0	37	5,	-3.981	-3.338	0.319	189	-1.765	-2.058	0.293	34
74B10	38	39,	-5.473	-5.950	-0.023	181	-1.787	-2.071	0.284	35
76A10	39	8,	-4.426	-4.226	-0.199	99	-3.338	-3.618	0.281	36
76GA0	40	18,	-3.618	-3.194	-0.424	58	-3.145	-3.410	0.267	37
74FF0	41	28,	-2.760	-2.453	-0.307	263	-5.238	-5.518	0.281	38
74FA0	42	21,	-1.775	-1.320	-0.455	24	-2.218	-2.472	0.258	39
74FM0	43	8,	-2.553	-2.911	0.358	93	-3.184	-3.434	0.250	40
74FU0	44	54,	-1.947	-2.552	0.605	77	-0.785	-1.026	0.241	41
73CG0	45	42,	-4.097	-3.939	-0.159	125	-3.088	-3.325	0.238	42
74FC0	46	13,	-1.928	-1.938	0.010	0	-2.855	-3.087	0.233	43
74FJ0	49	3,	-2.929	-2.453	-0.477	98	-5.777	-6.008	0.231	44
74FK0	50	10,	-5.499	-6.254	0.756	36	-2.739	-2.958	0.218	45
74FQ0	51	28,	-2.919	-2.191	0.171	34	-2.728	-2.919	0.199	46
74KA0	52	8,	-2.881	-2.171	0.289	99	-1.944	-2.125	0.185	47
74KC0	53	8,	-3.184	-3.434	0.250	51	-2.819	-2.191	0.171	48
74CA0	54	8,	-4.335	-3.626	-0.709	88	-6.526	-6.688	0.153	49
74CB0	55	8,	-4.330	-3.779	-0.551	89	-1.231	-1.375	0.143	50
74CC0	56	9,	-4.558	-4.589	0.030	28	-2.392	-2.514	0.142	51
74FA1	57	11,	-2.859	-2.677	-0.182	121	-2.116	-2.251	0.135	52
74E50	58	7,	-3.145	-3.413	0.267	95	-2.429	-2.564	0.135	53
73PH0	59	5,	-3.257	-3.881	-0.176	85	-3.871	-3.174	0.103	54
73PB0	60	39,	-0.857	-0.733	0.077	123	-3.217	-3.309	0.092	55
73PD0	61	21,	-0.919	-0.953	0.044	4	-3.089	-3.099	0.090	56

73PFM	62	25.	-2.593	-2.894	-0.528	52	-2.891	-2.171	0.889	57
73PMB	63	5.	-2.889	-2.721	0.632	71	-4.488	-4.572	0.984	58
71N4B	64	4.	-1.943	-2.421	0.478	68	-3.792	-3.871	0.979	59
71QUB	65	4.	-2.368	-2.421	0.453	62	-0.657	-0.733	0.877	60
63AAB	66	3.	-2.416	-2.396	-0.026	126	-3.648	-3.728	0.867	61
65AAB	67	4.	-2.752	-2.323	-0.429	226	-2.988	-7.927	0.859	62
63AGB	68	5.	-3.792	-3.871	0.879	26	-0.793	-4.847	0.855	63
63BFB	70	16.	-5.631	-5.476	-0.155	85	-2.388	-3.421	0.853	64
71ABE	71	16.	-4.488	-4.572	0.984	113	-2.293	-2.344	0.852	65
71ADA	72	17.	-1.556	-1.273	-0.282	81	-0.918	-0.953	0.844	66
73DRA	73	11.	-1.737	-1.241	-0.496	287	-1.185	-1.227	0.843	67
71ACC	74	53.	-4.147	-4.785	0.598	56	-4.558	-4.589	0.839	68
73C6Q	75	57.	-5.913	-5.178	-0.435	76	-5.245	-5.272	0.826	69
73CEN	76	44.	-5.245	-5.272	0.026	9	-3.875	-3.899	0.824	70
73CFK	77	7.	-0.785	-1.026	0.241	79	-4.687	-4.710	0.823	71
73DAM	78	22.	-2.564	-2.897	-0.467	48	-1.925	-1.938	0.813	72
73ERA	79	15.	-4.687	-4.710	0.023	91	-1.585	-1.574	0.988	73
73ERF	80	18.	-2.653	-2.979	0.325	97	-2.717	-2.710	-0.008	74
71CAB	81	10.	-4.754	-4.176	-0.578	19	-3.549	-3.532	-0.017	75
73EGB	82	16.	-1.949	-1.790	-0.159	34	-5.473	-5.450	-0.023	76
73MCB	83	16.	-1.132	-1.566	0.434	88	-2.416	-2.390	-0.026	77
73LAB	84	6.	-0.546	-1.231	0.685	18	-3.992	-3.963	-0.029	78
77ECB	85	2.	-3.871	-3.174	0.193	105	-2.949	-2.868	-0.080	79
77EEB	86	53.	-7.898	-6.688	-0.410	30	-3.217	-3.125	-0.091	80
77DBB	88	53.	-6.526	-6.688	0.153	5	-3.635	-3.528	-0.117	81
78AEA	89	10.	-1.231	-1.375	0.143	27	-1.879	-1.749	-0.130	82
73KAB	90	8.	-1.948	-2.125	0.185	33	-3.620	-3.783	-0.136	83
63BAA	91	11.	-1.565	-1.574	0.008	78	-5.631	-5.476	-0.155	84
63CAA	92	11.	-1.782	-1.574	-0.208	138	-3.118	-2.962	-0.155	85
65BAA	93	7.	-2.952	-2.738	-0.214	46	-4.897	-3.939	-0.159	86
71BBA	94	5.	-2.596	-1.901	-0.695	82	-1.949	-1.790	-0.159	87
61AAB	95	8.	-2.428	-2.524	0.193	127	-4.839	-3.875	-0.164	88
61ARB	96	6.	-2.179	-2.681	0.502	59	-3.257	-3.081	-0.176	89
61ACB	97	8.	-2.717	-2.718	-0.000	117	-6.471	-6.291	-0.181	90
72AAB	98	31.	-5.777	-6.008	0.231	97	-2.859	-2.677	-0.182	91
72ACB	99	7.	-3.338	-3.618	0.281	16	-5.497	-5.315	-0.182	92
73CAB	100	15.	-1.498	-1.955	0.457	39	-4.426	-4.226	-0.199	93
72EAA	101	11.	-1.787	-2.071	0.284	18	-2.432	-2.226	-0.206	94
72BPD	103	22.	-1.579	-1.201	-0.378	92	-1.782	-1.574	-0.208	95
71JAB	104	3.	-3.897	-3.429	0.324	8	-3.385	-3.171	-0.213	96
71LAB	105	5.	-2.949	-2.868	-0.080	93	-2.952	-2.738	-0.214	97
72DMB	106	15.	-3.392	-2.894	-0.498	288	-4.553	-4.253	-0.248	98
72ACB	107	2.	-3.320	-2.992	-0.328	29	-2.137	-1.858	-0.279	99
71716	108	12.	-4.385	-5.091	0.587	285	-3.793	-3.510	-0.282	100
71J1D	109	13.	-1.765	-2.058	0.293	72	-1.556	-1.273	-0.282	101
72RFB	110	14.	-3.722	-4.162	0.440	41	-2.760	-2.453	-0.307	102
72RHA	111	28.	-5.325	-4.697	-0.628	112	-5.265	-4.951	-0.314	103
71JCE	112	14.	-5.265	-4.951	-0.314	124	-3.074	-2.738	-0.336	104
72SEB	113	16.	-2.293	-2.344	0.052	114	-3.881	-3.482	-0.339	105
72CCB	114	5.	-3.881	-3.482	-0.339	7	-6.823	-6.477	-0.346	106
71ZRB	115	18.	-6.082	-5.199	-0.883	193	-1.579	-1.201	-0.378	107
71ZD9	117	26.	-6.471	-6.291	-0.151	122	-3.744	-3.360	-0.384	108
65BAA	118	4.	-2.911	-3.415	0.504	197	-3.328	-2.922	-0.398	109
63AFB	119	9.	-1.681	-2.199	0.598	86	-7.898	-6.688	-0.418	110
63AAP	120	2.	-3.116	-2.962	-0.155	46	-3.518	-3.194	-0.424	111
63121	121	9.	-2.116	-2.251	0.135	67	-2.752	-2.323	-0.429	112
63AAA	122	14.	-3.744	-3.360	-0.384	75	-5.613	-5.178	-0.435	113
65ALB	123	7.	-3.217	-3.309	0.092	42	-1.775	-1.328	-0.455	114
65AVB	124	14.	-3.874	-2.738	-0.336	78	-2.594	-2.997	-0.467	115
61AAP	125	3.	-3.988	-3.329	0.736	21	-4.365	-3.894	-0.474	116
61AEB	126	7.	-3.648	-3.788	0.957	89	-2.929	-2.453	-0.477	117
62AAB	127	5.	-4.938	-3.875	-0.164	198	-3.399	-2.984	-0.488	118
64211	129	18.	-5.520	-5.861	0.341	73	-1.737	-1.241	-0.496	119
71RAB	201	3.	-2.289	-2.925	0.636	57	-2.893	-2.884	-0.528	120
74RCB	202	2.	-3.273	-3.686	0.413	55	-4.338	-3.779	-0.551	121
74BEB	203	7.	-5.255	-5.516	0.261	81	-4.754	-4.176	-0.578	122

74BG8	204	2.	-3.582	-3.955	0.453	12	-3.344	-2.753	-0.598	123
74BH8	205	4.	-3.793	-3.518	-0.282	111	-5.329	-4.697	-0.628	124
63HA8	206	4.	-2.968	-3.827	0.859	94	-2.596	-1.901	-0.695	125
73JC8	207	7.	-1.185	-1.227	0.043	32	-3.494	-2.786	-0.709	126
73JF8	208	10.	-4.588	-4.253	-0.246	54	-4.335	-3.626	-0.709	127
71CA8	209	8.	-2.618	-3.292	0.673	2	-2.971	-2.206	-0.763	128
71G48	210	18.	-4.565	-5.439	0.874	116	-6.002	-5.199	-0.803	129
65AA8	211	8.	-3.252	-3.743	0.491	11	-5.328	-4.391	-0.938	130


G&R MODEL RUN38
DEP VAR IS LNHTOT
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID


G&R MODEL RUN38 DEP VAR IS LHHTOT
RESIDUAL VS. FITTED Y
-6.688
-3.706
-0.733
POSITIVE
RESIDUALS
0
NEGATIVE
-6.688
-3.706
-0.733
FITTED Y

LINEAR LEAST-SQUARES CURVI FITTING PROGRAM

O&M MODEL RUN48 DEP VAR IS LMMUNS MIN Y = -7,4770 00 MAX Y = -1,8320 00 RANGE Y = 5,6450 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPES" MODEL

LMMUNS = B(0) + B(1)FIGSEN + B(2)FIGCOM + B(3)BOMNAV + B(4)BOMCOM
+ B(5)OI + B(6)SS + B(7)MCC + B(8)MEM + B(9)MPD
+ B(10)OVD + B(11)OCC + B(12)OCD + B(13)DEM + B(14)DPD
+ B(15)OUP + B(16)LUP + B(17)LWT + B(18)LPD

LMMUNS = LN(MMMUNS)
MMMUNS = UNSCHEDULED MAINTENANCE MANHOURS PER OPERATING HOUR

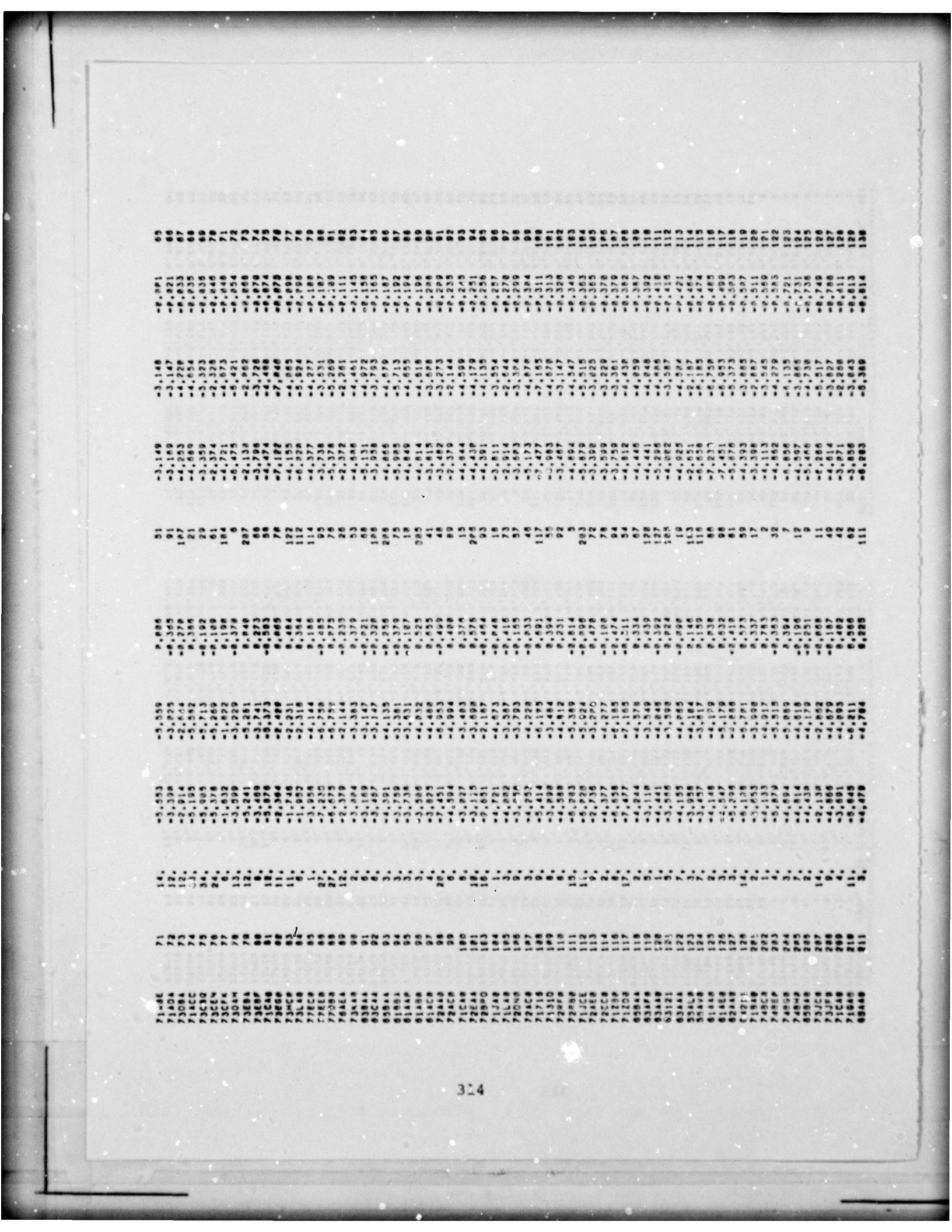
IND.VAR(I)	NAME	COEF.B(I)	S.E. COEF.	T-VALUE	B(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL.INF.X(I)
0		-9,775340 00							
1	FIGSEN	-2,374320-01	1,030-01	2,3	0,2482	0,0	1,0000 00	1,0000 00	0,04
2	FIGCOM	2,458930-01	1,790-01	1,4	0,1187	0,0	1,0000 00	1,0000 00	0,04
3	BOMNAV	7,991920-01	1,480-01	5,7	0,3173	0,0	1,0000 00	1,0000 00	0,14
4	BOMCOM	4,571180-01	1,590-01	2,9	0,1171	0,0	1,0000 00	1,0000 00	0,08
5	OI	-7,823980-03	1,410-03	5,4	0,4783	0,0	1,0000 02	1,0000 02	0,13
6	SS	-1,125540-02	1,990-03	5,6	0,6987	0,0	1,0000 02	1,0000 02	0,19
7	MCC	1,973440-04	4,140-05	4,8	0,5639	-1,1680 03	7,1220 03	8,2900 03	0,26
8	MEM	-1,729350-02	2,480-03	7,2	0,5957	-1,0280 01	8,9890 01	1,0170 02	0,38
9	MPD	-5,548120-04	1,610-04	3,4	0,7573	-3,3290 02	2,6650 03	2,9970 03	0,26
10	OVD	2,358640-08	1,370-08	1,7	0,4798	4,4890 03	2,4550 07	2,4550 07	0,18
11	OCC	-4,739390-08	1,260-08	3,7	0,3672	7,2990 02	2,8560 07	2,8560 07	0,23
12	OCD	4,554980-02	1,980-02	2,3	0,3093	1,7840-04	1,8610 01	1,8610 01	0,14
13	DEM	-1,768440-04	7,880-05	2,5	0,0898	2,7840 01	3,8470 03	3,8290 03	0,09
14	DPD	3,639180-07	1,290-07	2,8	0,5613	7,2990 02	4,1890 05	4,1880 05	0,26
15	OUP	4,889190-01	1,390-01	3,5	0,1549	2,8250-01	2,1830 00	1,9980 00	0,16
16	LUP	4,457310-01	4,140-02	10,8	0,6828	5,8380 05	1,3250 01	8,2170 00	0,63
17	LWT	3,372970-01	7,870-02	4,8	0,7558	0,0	5,1570 00	5,1570 00	0,30
18	LPD	2,488880-01	5,920-02	5,5	0,8583	1,0990 00	8,0880 00	8,9880 00	0,28

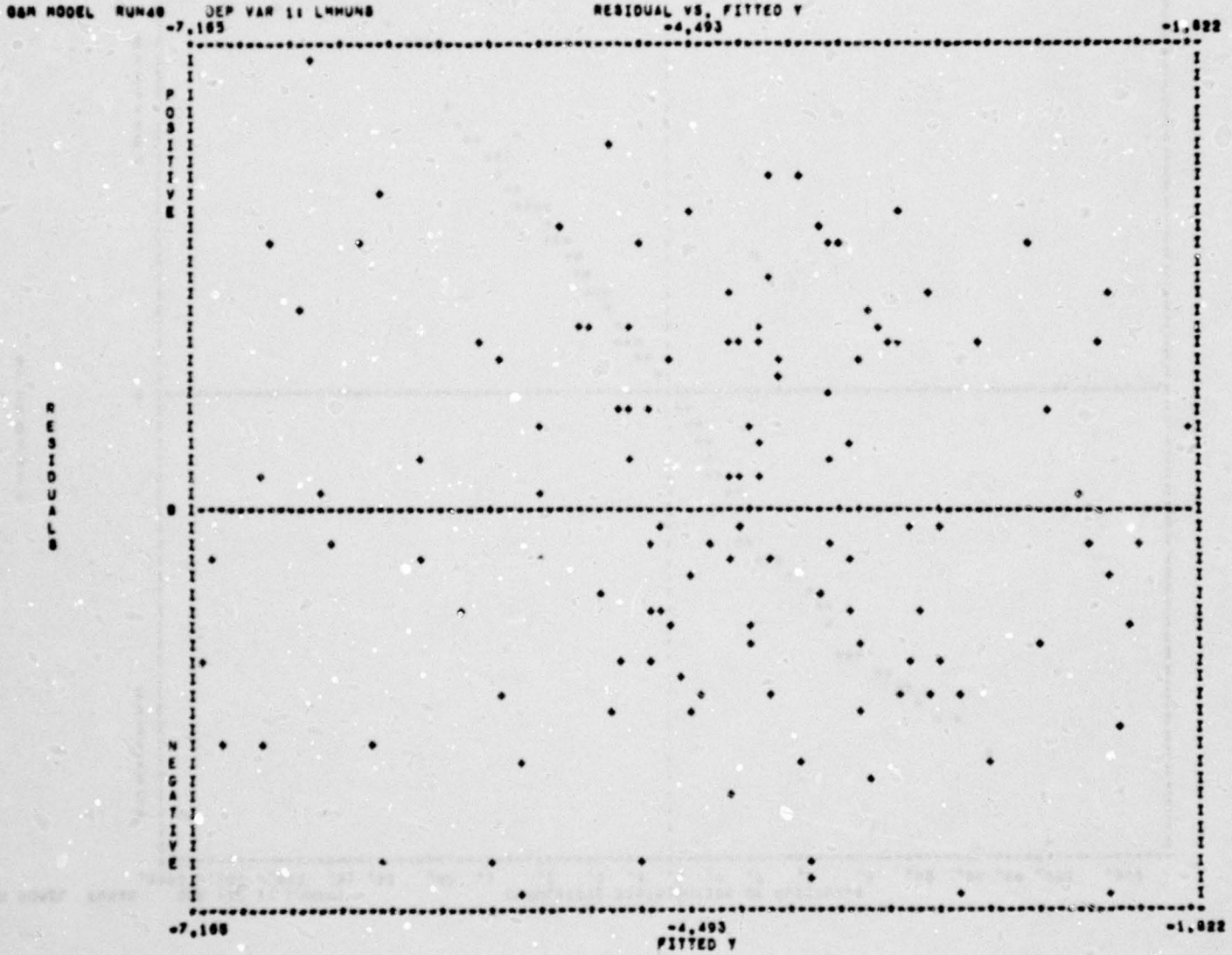
NO. OF OBSERVATIONS	134
NO. OF IND. VARIABLES	19
RESIDUAL DEGREES OF FREEDOM	111
F-VALUE	52,9
RESIDUAL ROOT MEAN SQUARE	0,4333840
RESIDUAL MEAN SQUARE	0,18782283
RESIDUAL SUM OF SQUARES	20,84824497
TOTAL SUM OF SQUARES	190,89678887
MULT. CORREL. COEF. SQUARED	,8957

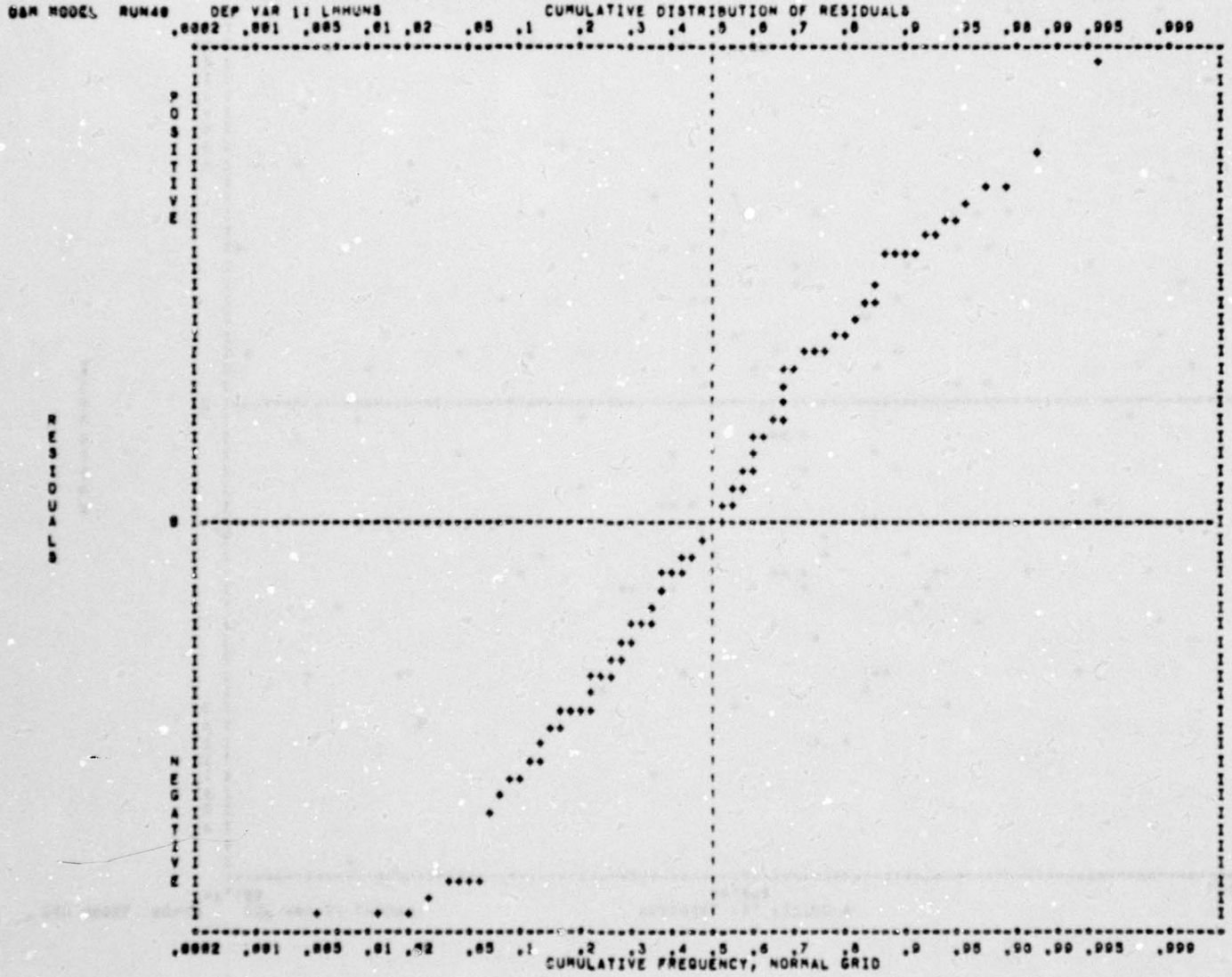
IND.VAR(I)	NAME	COEF.B(I)	MIN X(I)	MAX X(I)	RANGE X(I)	REL.INF.X(I)
*** COEFFICIENTS FROM PREVIOUS FIT ***						
0		-9,991890 00				
1	FIGSEN	-2,499440-01	0,0	1,0000 00	1,0000 00	0,04
2	FIGCOM	3,489720-01	0,0	1,0000 00	1,0000 00	0,06
3	BOMNAV	8,787140-01	0,0	1,0000 00	1,0000 00	0,15
4	BOMCOM	4,945880-01	0,0	1,0000 00	1,0000 00	0,08
5	OI	-7,588740-03	0,0	1,0000 02	1,0000 02	0,13
6	SS	-1,112540-02	0,0	1,0000 02	1,0000 02	0,19
7	MCC	1,898890-04	-1,1680 03	7,1220 03	8,2900 03	0,27
8	MEM	-1,769490-02	-1,0280 01	8,9890 01	1,0170 02	0,39
9	MPD	-5,333560-04	-3,3290 02	2,6650 03	2,9970 03	0,27
10	OVD	2,144930-08	4,4890 03	2,4550 07	2,4550 07	0,09
11	OCC	-4,522370-08	7,2990 02	2,8560 07	2,8560 07	0,22
12	OCD	5,736780-02	1,7840-04	1,8610 01	1,8610 01	0,16
13	DEM	-1,629180-04	2,7840 01	3,8470 03	3,8290 03	0,08
14	DPD	3,437380-07	7,2990 02	4,1890 05	4,1880 05	0,24
15	OUP	9,199280-01	2,8250-01	2,1830 00	1,9980 00	0,17
16	LUP	4,633880-01	5,8380 05	1,3250 01	8,2170 00	0,65
17	LWT	3,878180-01	0,0	5,1570 00	5,1570 00	0,27
18	LPD	2,527810-01	1,0990 00	8,0880 00	8,9880 00	0,30

RESIDUAL ROOT MEAN SQUARE	0,43574113
RESIDUAL MEAN SQUARE	0,18987034
RESIDUAL SUM OF SQUARES	21,07568729
TOTAL SUM OF SQUARES	190,89678887
MULT. CORREL. COEF. SQUARED	,8944

ORDERED BY COMPUTER INPUT						ORDERED BY RESIDUALS				
IDENT,	OBSV,	WEB DISTANCE	OBS, Y	FITTED Y	RESIDUAL	OBSV,	OBS, Y	FITTED Y	ORDERED RESID,	SEQ
71B2P	1	1,	-4,150	-4,248	0,098	35	-5,493	-6,486	0,993	1
71L8P	2	3,	-4,113	-3,545	-0,569	282	-4,133	-4,917	0,783	2
71M6P	3	13,	-3,797	-4,274	0,477	31	-3,347	-4,069	0,722	3
71PKP	4	1,	-3,997	-4,265	0,268	44	-3,283	-3,915	0,712	4
71P8P	5	4,	-4,894	-4,547	-0,346	185	-5,414	-6,105	0,691	5
71710	6	12,	-6,475	-6,421	-0,054	97	-3,825	-4,488	0,655	6
724GP	7	8,	-6,856	-6,135	-0,721	24	-2,749	-3,378	0,638	7
71FAP	9	1,	-5,466	-4,730	-0,736	126	-4,547	-5,179	0,632	8
71F8P	10	8,	-4,849	-4,655	-0,194	63	-3,168	-3,774	0,614	9
71CAP	11	4,	-6,266	-5,517	-0,749	28	-4,155	-4,744	0,590	10
71DAP	12	2,	-4,527	-3,866	-0,731	64	-3,131	-3,716	0,585	11
51EAP	13	2,	-4,396	-4,807	0,411	181	-3,115	-3,690	0,576	12
72AAP	14	3,	-4,636	-4,853	0,217	128	-6,128	-6,701	0,573	13
72ABP	15	4,	-4,844	-4,599	-0,245	88	-2,089	-2,659	0,570	14
63BDP	16	9,	-6,419	-6,472	0,054	210	-5,645	-6,211	0,566	15
71AEP	17	12,	-3,398	-2,887	-0,511	96	-3,598	-4,032	0,525	16
74JAP	18	3,	-3,811	-3,554	-0,257	83	-1,746	-2,231	0,484	17
74JCP	19	5,	-4,925	-4,504	-0,421	3	-3,797	-4,274	0,477	18
72GA1	20	6,	-4,155	-4,744	0,590	113	-2,736	-3,206	0,470	19
71ZA0	21	2,	-4,689	-4,854	-0,835	119	-3,119	-3,549	0,439	20
73EGP	24	7,	-2,748	-3,378	0,638	58	-6,134	-6,558	0,424	21
73EP0	25	16,	-2,337	-2,578	0,241	13	-4,396	-4,807	0,411	22
73KA0	26	18,	-2,372	-2,261	-0,111	209	-3,691	-4,093	0,402	23
73HCP	27	8,	-2,543	-2,928	0,385	99	-4,594	-4,994	0,400	24
73NA0	28	10,	-3,287	-3,559	0,352	204	-4,894	-5,289	0,394	25
73QB0	29	6,	-3,359	-3,323	-0,036	199	-3,998	-3,484	0,394	26
735C0	30	7,	-3,743	-4,114	0,371	74	-5,195	-5,582	0,386	27
73K80	31	1,	-3,347	-4,069	0,722	27	-2,543	-2,928	0,385	28
73KE0	32	5,	-4,882	-4,279	-0,583	98	-3,884	-3,383	0,379	29
73KF0	33	3,	-4,669	-4,773	0,104	108	-3,827	-3,483	0,376	30
73KK0	34	5,	-4,816	-4,185	-0,589	30	-3,743	-4,114	0,371	31
7593P	35	8,	-5,493	-6,486	0,993	4	-3,897	-4,255	0,358	32
748D8	36	3,	-3,968	-4,169	0,200	84	-1,952	-2,316	0,364	33
748F8	37	4,	-3,856	-4,214	0,358	37	-3,856	-4,214	0,358	34
74810	38	20,	-5,836	-5,939	0,103	28	-3,287	-3,559	0,352	35
78A10	39	4,	-5,115	-5,299	0,185	281	-3,653	-3,998	0,337	36
78GA0	40	10,	-4,189	-4,199	0,009	118	-4,244	-4,578	0,334	37
74FF0	41	27,	-3,815	-3,598	-0,208	56	-5,167	-5,497	0,330	38
74FA0	42	11,	-3,071	-2,260	-0,811	43	-3,682	-3,979	0,297	39
74FH0	43	7,	-3,682	-3,979	0,297	80	-3,469	-3,741	0,273	40
74FU0	44	28,	-3,203	-3,915	0,712	25	-2,337	-2,578	0,241	41
73CG0	45	21,	-5,173	-4,870	-0,304	110	-4,584	-4,812	0,231	42
74FC0	46	7,	-3,482	-3,273	-0,209	211	-4,479	-4,704	0,225	43
74FJ0	49	2,	-4,614	-3,827	-0,788	14	-4,636	-4,853	0,217	44
74FK0	50	6,	-6,134	-6,558	0,424	36	-3,968	-4,169	0,200	45
74F00	51	27,	-3,149	-3,148	-0,001	77	-1,632	-1,822	0,190	46
74KA0	52	4,	-3,843	-3,657	0,814	85	-3,958	-4,144	0,186	47
74KC0	53	4,	-4,896	-4,461	-0,145	34	-5,115	-5,299	0,185	48
74CA0	54	4,	-4,812	-4,430	-0,382	124	-3,457	-3,617	0,159	49
74CB0	55	3,	-4,983	-4,670	-0,313	123	-3,954	-4,104	0,148	50
74CC0	56	4,	-5,167	-5,497	0,330	65	-3,816	-3,716	0,100	51
74F41	57	9,	-3,603	-3,304	-0,299	33	-4,889	-4,773	0,104	52
74E80	58	4,	-4,474	-4,498	0,024	38	-5,836	-5,939	0,103	53
73PH0	59	3,	-4,393	-3,885	-0,507	1	-4,150	-4,248	0,098	54
73P90	60	21,	-2,959	-2,559	0,579	49	-4,189	-4,189	0,000	55
73P00	61	31,	-2,374	-2,528	0,045	34	-4,816	-4,185	0,030	56
73PFP	62	14,	-3,656	-3,843	0,813	88	-6,675	-6,750	0,075	57
73PH0	63	3,	-3,168	-3,774	0,614	92	-2,364	-2,429	0,065	58
71NA0	64	2,	-3,131	-3,716	0,585	16	-6,419	-6,472	0,054	59
710U0	65	2,	-3,810	-3,716	0,106	79	-5,241	-5,281	0,040	60
63AA0	66	1,	-3,798	-3,726	-0,072	125	-4,148	-4,179	0,030	61
65AA0	67	2,	-4,448	-4,859	0,387	121	-3,588	-3,598	0,024	62
63AG0	68	3,	-5,131	-4,972	-0,158	32	-3,643	-3,657	0,014	63
638F0	70	13,	-7,122	-7,046	-0,075	71	-5,553	-5,559	0,006	64




G&M MODEL RUN48 DEP VAR IS LMMUNB
RESIDUAL VS. FITTED Y
-7.165
-4.493
-1.822
POSITIVE
0
NEGATIVE
RESIDUALS
-7.165
-4.493
-1.822
FITTED Y


O&M MODEL RUN48 DEP VAR 11 LHHUNS CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&R MODEL RUN38 DEP VAR IS LMMSMO MIN Y = -9,8910 00 MAX Y = -8,2720-01 RANGE Y = 8,2640 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPOD" MODEL
LMMSMO = B(0) + B(1)FIGCOM + B(2)BOMNAV + B(3)BOMCOM + B(4)DI
+ B(5)PS + B(6)SS + B(7)MCD + B(8)MEM + B(9)DUP
+ B(10)DCO + B(11)DEM + B(12)DUF + B(13)LUP + B(14)LVO
LMMSMO = LN(MMMSMC)
MMMSMO = SHOP MAINTENANCE MANHOURS PER OPERATING HOUR

IND.VAR(I)	NAME	COEF.B(I)	S.E. COEF.	T-VALUE	R(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL.IMP.X(I)
0		-1,124560 01							
1	FIGCOM	7,489710-01	2,280-01	3,3	7,8925	0,0	1,0000 00	1,0000 00	0,09
2	BOMNAV	3,874220-01	1,650-01	1,9	0,1812	0,0	1,0000 00	1,0000 00	0,04
3	BOMCOM	9,088750-01	2,050-01	4,4	0,1149	0,0	1,0000 00	1,0000 00	0,11
4	DI	-1,746280-02	1,770-03	9,9	0,4487	0,0	1,0000 02	1,0000 02	0,21
5	PS	-5,683330-03	2,630-03	2,2	0,0796	0,0	1,0000 02	1,0000 02	0,07
6	SS	-1,807850-02	2,400-03	7,5	0,6462	0,0	1,0000 02	1,0000 02	0,22
7	MCD	3,236290-01	5,150-02	6,3	0,3536	-1,2150 00	5,4540 00	6,6690 00	0,26
8	MEM	-3,178140-02	3,060-03	10,4	0,5871	-1,0220 01	0,0000 01	1,0220 02	0,36
9	DUP	3,914800-12	3,380-12	1,2	0,1448	3,6910 05	1,4360 11	1,4360 11	0,07
10	DCO	-7,257750-02	2,520-02	2,9	0,2847	1,7840-04	1,8610 01	1,8610 01	0,16
11	DEM	-3,262990-04	8,910-05	3,7	0,0679	2,7840 01	3,0470 03	3,0220 03	0,12
12	DUF	1,713460-01	1,710-01	1,0	0,0818	2,0250-01	2,1830 00	1,9800 00	0,04
13	LUP	6,119970-01	5,260-02	11,6	0,6720	5,0380 00	1,3250 01	8,2170 00	0,61
14	LVO	6,212180-01	6,440-02	9,6	0,5898	3,4810 00	9,0120 00	5,6110 00	0,42

NO. OF OBSERVATIONS	130
NO. OF IND. VARIABLES	14
RESIDUAL DEGREES OF FREEDOM	115
F-VALUE	87,4
RESIDUAL ROOT MEAN SQUARE	0,55815869
RESIDUAL MEAN SQUARE	0,31153228
RESIDUAL SUM OF SQUARES	35,82628256
TOTAL SUM OF SQUARES	329,94538961
MULT. CORREL. COEF. SQUARED	,8914

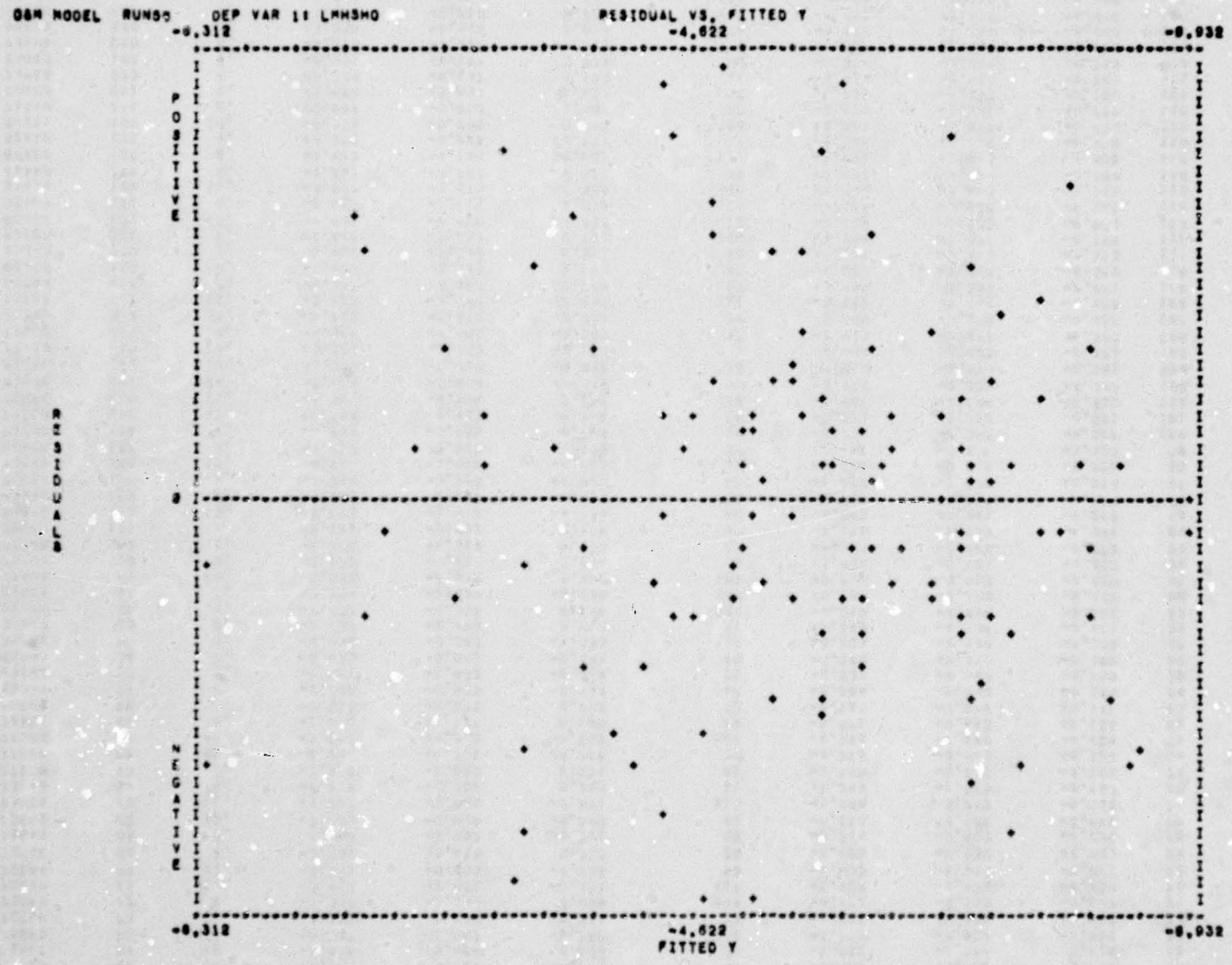
IND.VAR(I)	NAME	COEF.B(I)	MIN X(I)	MAX X(I)	RANGE X(I)	REL.IMP.X(I)
*** COEFFICIENTS FROM PREVIOUS FIT ***						
0		-1,146880 01				
1	FIGCOM	8,426910-01	0,0	1,0000 00	1,0000 00	0,10
2	BOMNAV	4,182110-01	0,0	1,0000 00	1,0000 00	0,05
3	BOMCOM	9,395380-01	0,0	1,0000 00	1,0000 00	0,11
4	DI	-1,783970-02	0,0	1,0000 02	1,0000 02	0,21
5	PS	-0,478910-03	0,0	1,0000 02	1,0000 02	0,07
6	SS	-1,988860-02	0,0	1,0000 02	1,0000 02	0,23
7	MCD	3,139220-01	-1,2150 00	5,4540 00	6,6690 00	0,25
8	MEM	-3,237930-02	-1,0220 01	0,0000 01	1,0220 02	0,39
9	DUP	7,343870-12	3,6910 05	1,4360 11	1,4360 11	0,13
10	DCO	-5,884180-02	1,7840-04	1,8610 01	1,8610 01	0,13
11	DEM	-3,761690-04	2,7840 01	3,0470 03	3,0220 03	0,14
12	DUF	2,438150-01	2,0250-01	2,1830 00	1,9800 00	0,06
13	LUP	6,788290-01	5,0380 00	1,3250 01	8,2170 00	0,67
14	LVO	9,657860-01	3,4810 00	9,0120 00	5,6110 00	0,38

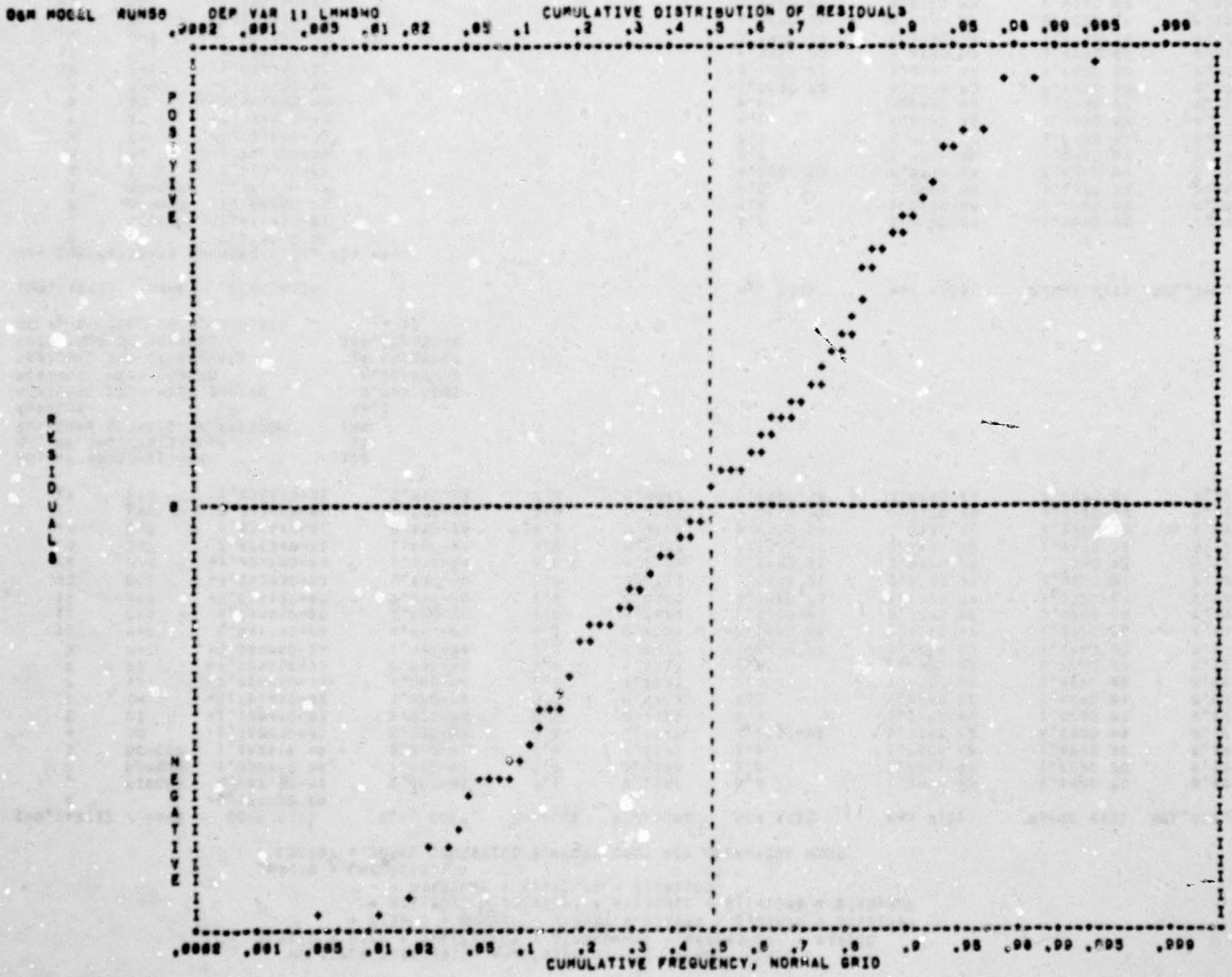
RESIDUAL ROOT MEAN SQUARE	0,56731835
RESIDUAL MEAN SQUARE	0,32185811
RESIDUAL SUM OF SQUARES	37,01276231
TOTAL SUM OF SQUARES	329,94538961
MULT. CORREL. COEF. SQUARED	,8877

IDENT.	OBSV.	NBR	ORDERED BY DISTANCE	COMPUTER INPUT OBS. Y	FITTED Y	RESIDUAL
71B2B	1	1.		-4.829	-3.656	-0.372
71L9B	2	5.		-3.357	-2.568	-0.789
71M8B	3	21.		-3.357	-3.589	0.232
71P4B	4	2.		-3.542	-3.651	0.110
71P8B	5	5.		-3.979	-4.863	0.884
71710	6	16.		-6.246	-7.216	0.771
72AGB	7	8.		-6.598	-5.879	-0.719
71FAB	9	5.		-4.103	-4.474	0.371
71F8B	10	15.		-4.549	-4.719	0.161
71CAB	11	4.		-5.817	-5.035	-0.782
71DAB	12	3.		-3.681	-3.334	-0.347
51EAB	13	5.		-3.572	-4.835	1.264
52AAB	14	8.		-3.628	-4.724	1.096
52A8B	15	9.		-3.572	-4.458	0.885
63BDB	16	9.		-6.884	-5.844	-0.159
71AEB	17	16.		-1.574	-2.671	1.097
74JAB	18	9.		-2.724	-2.397	-0.327
74JCB	19	7.		-3.981	-4.220	0.239
52GA1	20	3.		-4.837	-4.881	-0.956
71ZAB	21	4.		-5.789	-4.557	-1.151
73EGB	24	11.		-3.139	-3.368	0.229
73EPB	25	19.		-1.424	-2.028	0.624
73HAB	26	18.		-1.925	-0.932	-0.993
73HCB	27	18.		-2.613	-2.231	-0.383
73NAB	28	26.		-2.821	-3.306	0.485
73Q9B	29	8.		-2.488	-2.563	0.075
73SCB	30	11.		-4.135	-3.860	-0.275
73K8B	31	3.		-2.889	-3.163	0.273
73KEB	32	4.		-3.804	-3.333	-0.471
73KFB	33	2.		-4.531	-4.344	-0.188
73KKB	34	18.		-3.844	-3.782	0.738
75938	35	8.		-5.468	-5.631	0.171
74B0B	36	6.		-3.128	-3.228	0.100
74BFB	37	2.		-3.573	-3.446	-0.128
74B1B	38	36.		-6.687	-6.398	-0.289
76A1B	39	5.		-5.158	-4.504	-0.654
76GAB	40	8.		-4.565	-4.281	-0.283
74FFB	41	21.		-3.195	-2.233	-0.962
74FAB	42	15.		-2.105	-1.349	-0.756
74FHB	43	5.		-2.958	-3.131	0.172
74FUB	44	46.		-2.788	-3.515	1.229
73CGB	46	38.		-4.514	-4.799	0.285
74FCB	48	10.		-2.163	-2.968	-0.998
74FJB	49	3.		-3.137	-2.574	-0.563
74FKB	50	18.		-8.262	-7.998	0.836
74FQB	51	16.		-2.417	-2.539	0.122
74KAB	52	7.		-2.318	-2.415	0.097
74MCB	53	7.		-3.481	-3.838	0.378
73CAB	54	5.		-5.345	-4.178	-1.167
74C8B	55	7.		-5.102	-4.777	-0.328
74CCB	56	7.		-5.432	-4.976	-0.455
74FA1	57	9.		-3.532	-3.644	0.112
74E8B	58	6.		-3.453	-3.882	0.428
73PHB	59	4.		-3.646	-3.381	-0.265
73P8B	60	29.		-0.930	-0.966	0.036
73PDB	61	13.		-1.173	-1.648	0.476
73PFB	62	20.		-2.948	-2.618	-0.321
73PHB	63	4.		-2.589	-2.774	0.185
71NAB	64	4.		-2.317	-2.622	0.305
71QUB	65	4.		-2.715	-2.622	-0.094
63AAB	66	3.		-2.788	-2.588	-0.121
65AAB	67	5.		-2.955	-2.453	-0.502
63AGB	68	4.		-4.899	-4.219	0.120
63BFB	70	15.		-5.886	-6.177	0.291

OBSV.	OBS. Y	FITTED Y	ORDERED RESID.	SEQ
209	-3.939	-4.364	1.325	1
13	-3.572	-4.835	1.264	2
44	-2.286	-3.515	1.229	3
17	-1.574	-2.671	1.097	4
14	-3.628	-4.724	1.096	5
210	-4.988	-6.832	1.051	6
201	-2.587	-3.618	1.038	7
84	-0.927	-1.791	0.963	8
15	-3.572	-4.458	0.885	9
74	-4.646	-5.490	0.844	10
58	-6.262	-7.098	0.836	11
96	-2.487	-3.317	0.830	12
211	-3.598	-4.424	0.825	13
118	-3.217	-3.997	0.780	14
5	-6.246	-7.016	0.770	15
34	-3.644	-3.782	0.738	16
198	-5.034	-5.781	0.747	17
119	-1.852	-2.547	0.696	18
25	-1.424	-2.028	0.624	19
100	-1.743	-2.318	0.575	20
194	-3.322	-3.827	0.505	21
98	-2.363	-2.856	0.492	22
28	-2.821	-3.306	0.485	23
61	-1.173	-1.648	0.476	24
71	-4.911	-5.355	0.445	25
98	-5.985	-6.428	0.443	26
38	-3.453	-3.882	0.428	27
53	-3.461	-3.838	0.378	28
9	-4.103	-4.474	0.371	29
189	-2.884	-2.433	0.349	30
99	-3.673	-4.017	0.344	31
207	-1.682	-2.010	0.328	32
72	-1.738	-2.056	0.318	33
89	-3.301	-3.618	0.317	34
64	-2.317	-2.622	0.305	35
79	-5.886	-6.177	0.291	36
110	-4.311	-4.598	0.287	37
46	-4.514	-4.799	0.285	38
125	-3.522	-3.799	0.276	39
31	-2.889	-3.163	0.273	40
63	-2.589	-2.774	0.185	41
204	-3.931	-4.187	0.256	42
19	-3.981	-4.220	0.239	43
3	-3.357	-3.589	0.232	44
123	-3.933	-4.165	0.232	45
24	-3.139	-3.368	0.229	46
121	-2.481	-2.589	0.108	47
43	-2.958	-3.131	0.172	48
35	-5.468	-5.631	0.171	49
128	-6.521	-6.686	0.165	50
19	-4.549	-4.710	0.161	51
101	-2.101	-2.231	0.130	52
51	-2.417	-2.539	0.122	53
68	-4.099	-4.219	0.120	54
57	-3.532	-3.644	0.112	55
4	-3.542	-3.651	0.110	56
223	-6.229	-6.137	0.108	57
89	-1.619	-1.727	0.108	58
120	-3.451	-3.552	0.101	59
36	-3.128	-3.220	0.100	60
77	-1.345	-1.444	0.099	61
52	-2.318	-2.415	0.097	62
5	-3.979	-4.863	0.884	63
206	-3.232	-3.310	0.078	64

71ABE	71	10.	-4.911	-5.355	0.445	29	-2.456	-2.563	0.075	65
71ADA	72	12.	-1.738	-2.049	0.310	68	-0.930	-0.966	0.036	66
73DBA	73	10.	-2.106	-1.535	-0.572	89	-3.602	-3.623	0.021	67
71ACC	74	40.	-4.645	-5.090	0.444	93	-2.732	-2.750	0.018	68
73CBQ	75	45.	-6.947	-5.980	-1.007	202	-3.860	-3.834	-0.026	69
73CEN	76	40.	-7.333	-7.002	-0.331	28	-4.837	-4.801	-0.036	70
73CFK	77	8.	-1.345	-1.444	0.099	126	-4.172	-4.138	-0.042	71
73DAM	78	20.	-3.812	-2.651	-0.361	117	-0.927	-0.876	-0.050	72
73EBA	79	11.	-5.571	-5.433	-0.138	83	-1.925	-1.853	-0.071	73
73EBF	80	7.	-3.301	-3.618	0.317	26	-1.825	-1.932	-0.093	74
71CA0	81	7.	-5.149	-4.927	-0.221	65	-2.716	-2.622	-0.094	75
73EG0	82	18.	-3.033	-2.829	-0.205	49	-2.103	-2.006	-0.098	76
73HCB	83	11.	-1.925	-1.853	-0.071	113	-3.368	-3.252	-0.115	77
73LAB	84	4.	-0.827	-1.791	0.963	91	-1.798	-1.673	-0.117	78
77ECB	85	1.	-3.682	-3.623	0.021	66	-2.726	-2.598	-0.121	79
77EEB	86	46.	-9.891	-8.312	-0.788	37	-3.573	-3.446	-0.126	80
77DBB	88	46.	-8.503	-8.312	-0.192	127	-4.382	-4.248	-0.134	81
76AEA	89	6.	-1.619	-1.727	0.108	79	-5.571	-5.433	-0.138	82
73KAB	90	7.	-2.363	-2.856	0.492	93	-3.223	-3.082	-0.141	83
83BAA	91	9.	-1.790	-1.673	-0.117	16	-6.824	-5.644	-0.159	84
63CAA	92	9.	-1.987	-1.673	-0.314	33	-4.531	-4.344	-0.186	85
65BAC	93	6.	-3.223	-3.082	-0.141	88	-6.593	-6.312	-0.192	86
61BBA	94	5.	-2.990	-2.807	-0.183	82	-3.233	-2.829	-0.205	87
61AAP	95	8.	-2.732	-2.758	0.018	81	-5.149	-4.927	-0.221	88
61ABP	96	6.	-2.487	-3.317	0.830	285	-4.312	-4.090	-0.222	89
61ACP	97	8.	-3.124	-2.844	-0.280	195	-3.384	-3.159	-0.225	90
72AAB	98	26.	-5.985	-6.428	0.443	107	-3.793	-3.535	-0.259	91
72ACB	99	9.	-3.673	-4.017	0.344	59	-3.646	-3.381	-0.265	92
71CA0	100	11.	-1.743	-2.318	0.575	39	-4.135	-3.858	-0.275	93
72EAA	101	11.	-2.181	-2.231	0.130	97	-3.124	-2.844	-0.280	94
72BPO	103	16.	-2.993	-1.278	-0.734	48	-4.565	-4.281	-0.283	95
71JAB	104	2.	-3.322	-3.827	0.505	38	-6.687	-6.398	-0.289	96
71LAB	105	4.	-3.384	-3.159	-0.225	92	-1.987	-1.673	-0.314	97
72CNB	106	12.	-4.244	-3.628	-0.615	62	-2.948	-2.618	-0.321	98
72ACB	107	2.	-3.793	-3.535	-0.259	55	-5.182	-4.777	-0.326	99
71716	108	9.	-5.934	-5.761	0.727	16	-2.724	-2.397	-0.327	100
71310	109	12.	-2.884	-2.433	0.349	76	-7.333	-7.002	-0.331	101
72RP6	110	11.	-4.311	-4.598	0.287	122	-4.941	-4.608	-0.333	102
72RNP	111	24.	-5.899	-5.219	-0.680	12	-3.681	-3.334	-0.347	103
71JCE	112	13.	-3.900	-5.442	-0.458	78	-3.912	-3.551	-0.361	104
72AEB	113	13.	-3.368	-3.252	-0.115	1	-4.829	-3.456	-0.372	105
72CCB	114	4.	-4.628	-4.845	0.583	27	-2.613	-2.231	-0.383	106
71ZB8	116	13.	-6.765	-5.816	-0.948	36	-5.432	-4.976	-0.455	107
71ZU8	117	19.	-6.927	-6.876	-0.050	112	-5.988	-5.442	-0.458	108
65BAA	118	4.	-3.217	-3.997	0.780	32	-3.804	-3.333	-0.471	109
63AP8	119	7.	-1.852	-2.547	0.695	67	-2.955	-2.453	-0.502	110
63AAB	120	2.	-3.451	-3.552	0.101	49	-3.137	-2.574	-0.563	111
63121	121	7.	-2.481	-2.589	0.108	124	-4.237	-3.671	-0.566	112
63AAA	122	15.	-4.941	-4.608	-0.333	73	-2.188	-1.858	-0.372	113
55ALB	123	6.	-3.933	-4.165	0.232	114	-4.628	-4.045	-0.583	114
55AVA	124	11.	-4.237	-3.671	-0.566	186	-4.244	-3.628	-0.615	115
61AAP	125	3.	-3.522	-3.799	0.276	39	-5.158	-4.584	-0.654	116
61AEP	126	8.	-4.172	-4.132	-0.040	111	-5.899	-5.219	-0.680	117
62AAB	127	4.	-4.382	-4.248	-0.134	7	-6.598	-5.879	-0.719	118
64211	128	14.	-6.521	-6.686	0.165	183	-2.883	-1.278	-0.734	119
71RAB	201	2.	-2.587	-3.618	1.030	42	-2.195	-1.349	-0.756	120
74BCB	202	1.	-3.868	-3.834	-0.026	88	-9.991	-8.312	-0.780	121
74BEB	203	6.	-6.829	-6.137	-0.188	11	-5.817	-5.035	-0.782	122
74BGB	204	2.	-3.931	-4.187	0.256	94	-2.998	-2.207	-0.783	123
74BHB	205	3.	-4.312	-4.090	-0.222	2	-3.357	-2.568	-0.789	124
65BAB	206	4.	-3.232	-3.310	0.078	208	-5.582	-4.794	-0.888	125
73JCB	207	6.	-1.882	-2.210	0.328	116	-6.765	-5.816	-0.948	126
73JEB	208	8.	-5.682	-4.794	-0.888	41	-3.195	-2.233	-0.962	127
71CA3	209	7.	-3.839	-4.364	1.325	75	-6.967	-5.980	-1.007	128
71GA0	210	14.	-4.980	-6.032	1.051	21	-5.709	-4.557	-1.151	129
65AA0	211	4.	-0.600	-4.424	0.825	84	-0.345	-4.178	-1.167	130


GSM MODEL RUN50 DEP VAR IS LMMSMO
RESIDUAL VS. FITTED Y
-0.312
-4.622
-8.932
POSITIVE
RESIDUALS
0
NEGATIVE
-0.312
-4.622
-8.932
FITTED Y


B&M MODEL RUN58 DEP VAR 11 LHHSHO
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN80 DEP VAR IS LLSCTO MIN Y = -4.5297 00 MAX Y = 3.2820 00 RANGE Y = 7.8110 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPOS" MODEL

LLSCTO = B(0) + B(1)FIGCOM + B(2)BOMNAV + B(3)BOMCOM + B(4)CO
+ B(5)DI + B(6)EM + B(7)XT + B(8)SS + B(9)MVO + B(10)MMT
+ B(11)DVO + B(12)DMT + B(13)DCC + B(14)DPS + B(15)DUP
+ B(16)LUP + B(17)LVO + B(18)LPO

LLSCTO = LN(LSCTOT)

LSCTOT = TOTAL LOGISTICS SUPPORT COST PER OPERATING HOUR

IND,VAR(I)	NAME	COEF,B(I)	S.E. COEF.	T-VALUE	B(I)SUMD	MIN X(I)	MAX X(I)	RANGE X(I)	REL.INF,X(I)
0		-8.188820 00							
1	FIGCOM	6.987160-01	2.250-01	3.1	0.1187	0.0	1.0000 00	1.0000 00	0.09
2	BOMNAV	1.032940 00	1.790-01	5.8	0.2520	0.0	1.0000 00	1.0000 00	0.13
3	BOMCOM	1.059190 00	2.310-01	4.6	0.1087	0.0	1.0000 00	1.0000 00	0.14
4	CO	1.883350-01	5.260-02	3.6	0.3599	4.9230-03	6.6740 00	6.6690 00	0.17
5	DI	-1.188410-02	1.930-03	6.1	0.4678	0.0	1.0000 02	1.0000 02	0.15
6	EM	-1.791490-02	3.370-03	5.3	0.5413	0.0	1.0000 02	1.0000 02	0.23
7	XT	-9.899270-03	4.480-03	2.2	0.5665	0.0	1.0000 02	1.0000 02	0.12
8	SS	-9.885590-03	2.540-03	3.5	0.6534	0.0	1.0000 02	1.0000 02	0.12
9	MVO	-3.688980-04	1.040-04	3.5	0.8917	-1.3930 03	6.8670 03	8.1700 03	0.39
10	MMT	1.941380-02	4.490-03	4.3	0.8653	-3.1380 01	1.4140 02	1.7270 02	0.43
11	DVO	6.995990-08	2.620-08	2.7	0.7429	1.9360 03	2.4780 07	2.4780 07	0.22
12	DMT	-9.511130-05	5.090-05	1.9	0.6543	3.6860 00	1.1750 04	1.1750 04	0.14
13	DCC	-4.353900-09	1.740-08	2.5	0.3413	1.6800 01	2.8230 07	2.8230 07	0.16
14	DPS	-1.434770-04	1.330-04	3.3	0.2278	3.8190 01	2.9720 03	2.9340 03	0.17
15	DUP	7.371340-01	1.860-01	4.0	0.1657	1.7640-01	2.2160 00	1.8400 00	0.18
16	LUP	9.539680-01	5.460-02	18.1	0.6708	5.8300 00	1.3250 01	8.2170 00	0.58
17	LVO	3.643460-01	1.520-01	8.6	1.9171	3.4810 00	9.8120 00	5.8110 00	0.39
18	LPO	1.292340-01	5.550-02	2.0	0.6887	1.8990 00	8.8860 00	6.9880 00	0.18

NO. OF OBSERVATIONS	128
NO. OF IND. VARIABLES	18
RESIDUAL DEGREES OF FREEDOM	109
F-VALUE	44.3
RESIDUAL ROOT MEAN SQUARE	5.5881728S
RESIDUAL MEAN SQUARE	3.33639961
RESIDUAL SUM OF SQUARES	36.68935783
TOTAL SUM OF SQUARES	383.27289348
MULT. CORREL. COEF. SQUARED	.8788

IND,VAR(I)	NAME	COEF,B(I)	MIN X(I)	MAX X(I)	RANGE X(I)	REL.INF,X(I)
*** COEFFICIENTS FROM PREVIOUS FIT ***						
0		-7.979570 00				
1	FIGCOM	7.851430-01	0.0	1.0000 00	1.0000 00	0.10
2	BOMNAV	1.149780 00	0.0	1.0000 00	1.0000 00	0.15
3	BOMCOM	1.077190 00	0.0	1.0000 00	1.0000 00	0.14
4	CO	1.915970-01	4.9230-03	6.6740 00	6.6690 00	0.16
5	DI	-1.229970-02	0.0	1.0000 02	1.0000 02	0.16
6	EM	-1.723970-02	0.0	1.0000 02	1.0000 02	0.22
7	XT	-9.499290-03	0.0	1.0000 02	1.0000 02	0.12
8	SS	-8.351540-03	0.0	1.0000 02	1.0000 02	0.11
9	MVO	-3.336350-04	-1.3930 03	6.8670 03	8.1700 03	0.35
10	MMT	1.986410-02	-3.1380 01	1.4140 02	1.7270 02	0.44
11	DVO	8.725930-08	1.9360 03	2.4780 07	2.4780 07	0.21
12	DMT	-1.053590-04	3.6860 00	1.1750 04	1.1750 04	0.16
13	DCC	-4.249910-08	1.6800 01	2.8230 07	2.8230 07	0.15
14	DPS	-4.385250-04	3.8190 01	2.9720 03	2.9340 03	0.18
15	DUP	7.799840-01	1.7640-01	2.2160 00	1.8400 00	0.18
16	LUP	9.841310-01	5.8300 00	1.3250 01	8.2170 00	0.59
17	LVO	4.816820-01	3.4810 00	9.8120 00	5.8110 00	0.33
18	LPO	1.472840-01	1.8990 00	8.8860 00	6.9880 00	0.13

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

GSH MODEL NUMBR DEP VAR IS LLPCTC
RESIDUAL ROOT MEAN SQUARE 2.58393078
RESIDUAL MEAN SQUARE 6.34897516
RESIDUAL SUM OF SQUARES 57.18529224
TOTAL SUM OF SQUARES 385.27[illegible]5346
MULT. CORREL. COEF. SQUARED .8781

ORDERED BY COMPUTER INPUT

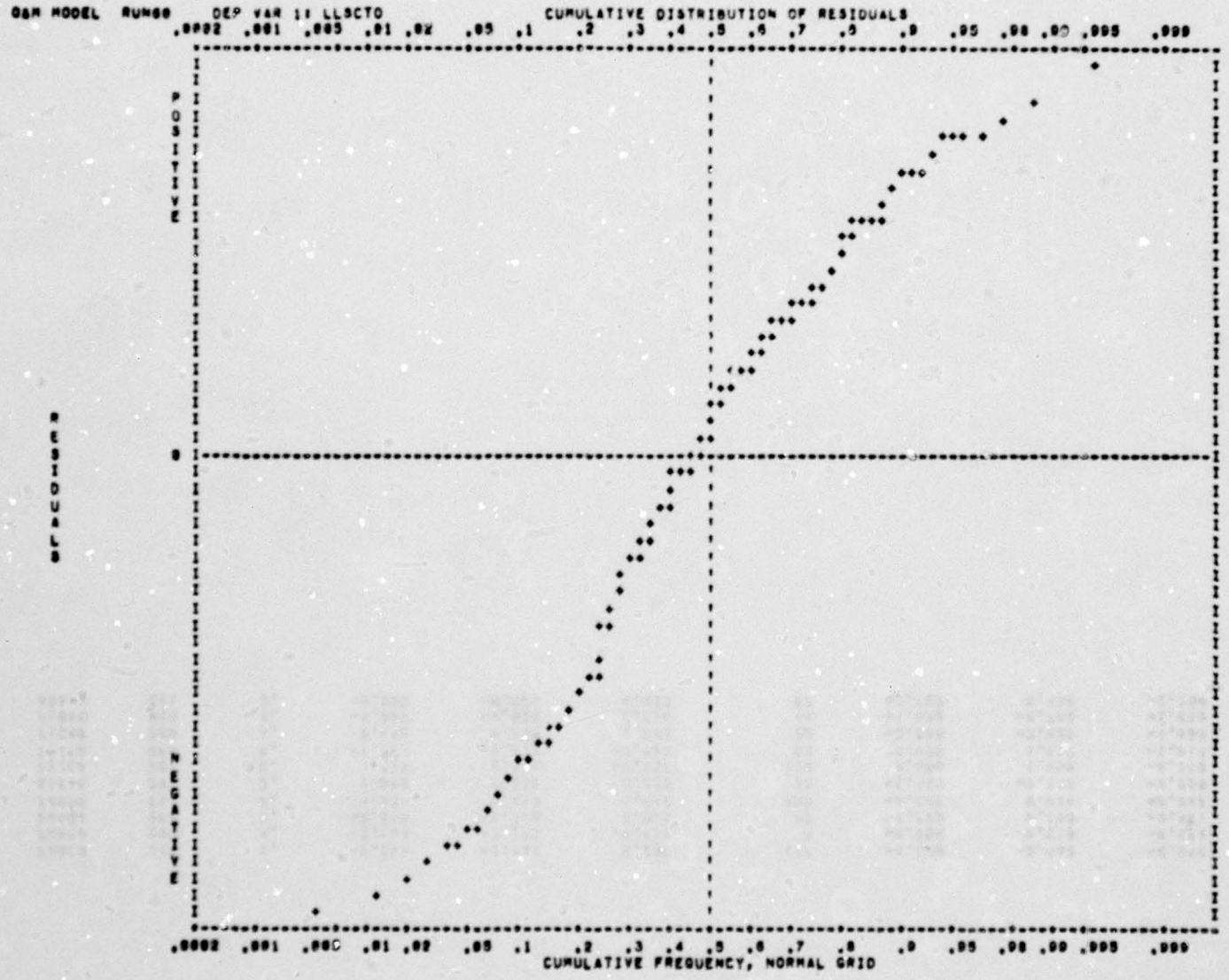
IDENT.	OBSV.	NSS DISTANCE	OBS. Y	FITTED Y	RESIDUAL
71B29	1	1.	-0.522	-0.429	-0.093
71L8A	2	2.	-0.174	0.094	-0.268
71PK8	4	1.	0.118	-0.461	0.578
71P6A	5	3.	-0.990	-0.778	-0.138
71719	6	12.	-2.999	-3.367	0.458
72AG9	7	7.	-3.257	-2.585	-0.731
71G58	8	2.	-0.659	0.215	-0.874
71FA8	9	4.	-0.786	-0.737	-0.049
71CAA	11	4.	-2.545	-1.825	-0.720
71D66	12	2.	0.998	-0.995	0.175
91EA8	13	3.	-0.445	-0.845	0.423
92AA8	14	4.	-0.809	-0.918	0.842
92A88	15	5.	0.813	-0.816	0.828
74J46	16	28.	1.215	0.599	0.617
74JC8	19	4.	-0.893	-0.585	-0.377
92GA1	20	7.	-0.384	-0.718	0.334
71ZA8	21	2.	-0.981	-0.979	0.017
71Z88	22	9.	-3.596	-2.470	-1.986
71ZC8	23	14.	-2.718	-3.618	0.899
73EGC	24	7.	0.985	0.632	0.352
73EP8	25	12.	1.678	1.385	0.286
73MA8	26	18.	2.481	2.377	0.104
73MC8	27	7.	1.842	1.852	-0.811
73NA8	28	18.	1.881	0.678	0.485
73G88	29	7.	1.591	1.548	-0.948
73488	31	3.	0.386	-0.514	0.828
734E8	32	3.	-0.812	-2.188	-0.632
73AF8	33	1.	-1.283	-0.455	-0.748
73KK8	34	5.	0.135	-0.295	0.438
75838	35	7.	-2.357	-2.589	0.212
74B08	36	2.	0.201	-0.156	0.357
74BF8	37	8.	-0.288	0.208	-0.537
74818	38	18.	-1.536	-1.951	0.395
78A18	39	3.	-0.999	-0.978	-0.021
76GA8	40	9.	0.815	0.936	-0.121
74FF8	41	15.	-0.128	0.463	-0.586
747A8	42	43.	0.954	1.530	-0.667
74FH8	43	4.	0.295	0.538	-0.243
74FU8	44	26.	1.344	1.214	0.138
53CG8	46	12.	-1.952	-0.793	-1.159
74FC8	48	8.	1.113	1.299	-0.186
74FJ8	49	2.	1.253	0.226	1.026
74FK8	50	7.	-2.724	-3.483	0.759
74F08	51	33.	2.[illegible]	1.666	0.411
74KA8	52	5.	0.598	0.742	-0.143
74HC8	53	4.	0.887	0.298	0.377
74C98	55	4.	-1.598	-0.638	-0.958
74CC8	56	4.	-1.804	-1.478	-0.326
74FA1	57	11.	0.654	0.772	-0.118
74E88	58	4.	-0.998	-0.129	0.831
73PH8	59	2.	-0.298	0.419	-0.718
73P86	60	16.	2.118	1.870	0.248
73P08	61	29.	2.376	1.758	0.617
73PF8	62	14.	0.898	1.117	-1.818
73PH2	63	3.	0.989	0.278	0.703
71N48	64	3.	0.861	0.635	0.226
719U8	65	3.	0.439	0.636	-0.196
83AA8	68	2.	0.397	0.532	-0.135

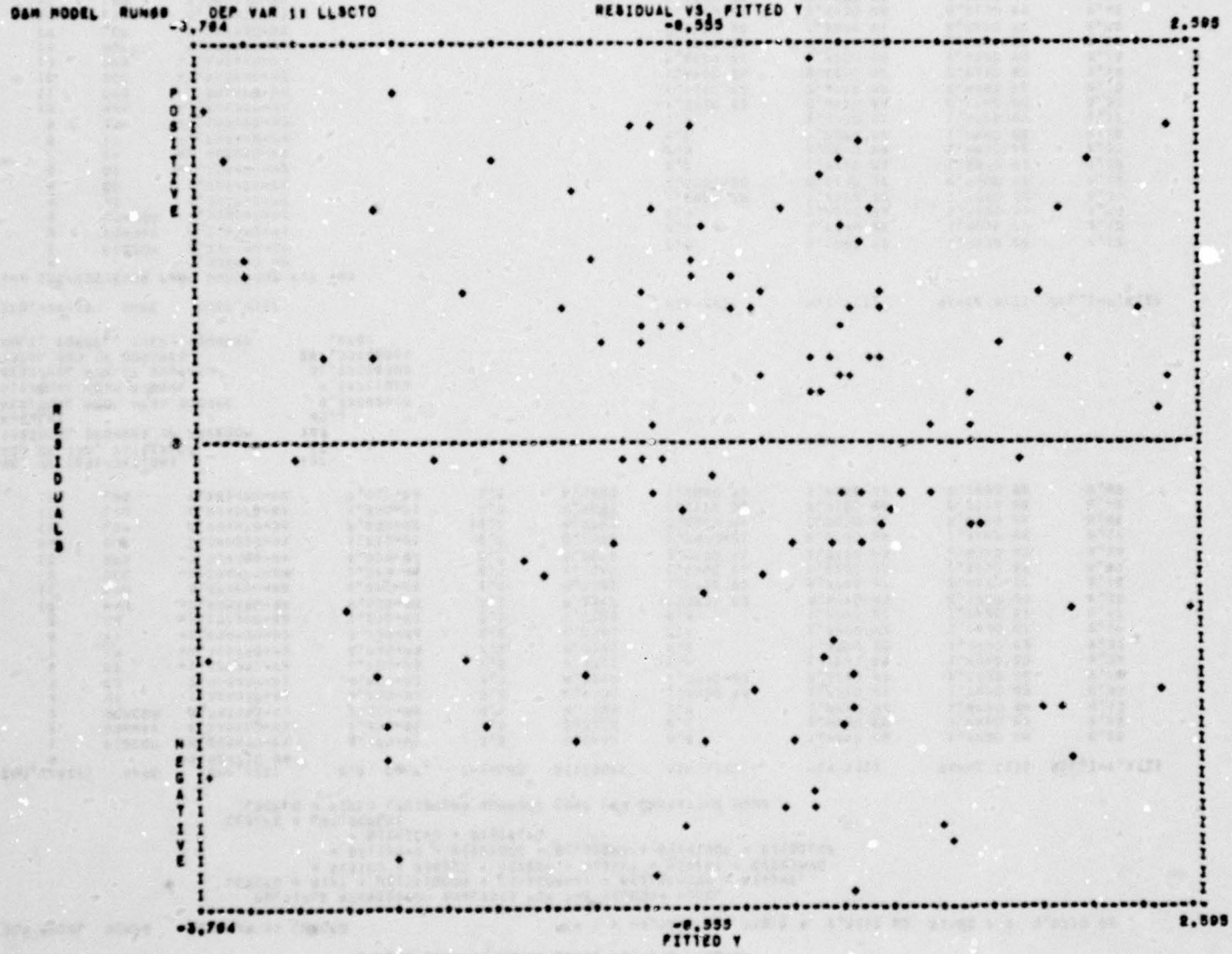
ORDERED BY RESIDUALS

OBSV.	OBS. Y	FITTED Y	ORDERED RESID.	SEQ
49	1.253	0.226	1.026	1
74	-1.479	-2.395	0.916	2
93	-2.719	-3.610	0.892	3
14	-0.869	-0.910	0.842	4
183	3.282	2.448	0.834	5
15	0.813	-0.816	0.828	6
31	0.388	-0.514	0.828	7
188	1.271	0.496	0.775	8
50	-2.724	-3.483	0.759	9
76	-1.810	-1.766	0.756	10
181	1.135	0.397	0.739	11
83	2.655	1.948	0.725	12
63	0.980	0.276	0.703	13
284	-0.668	-1.314	0.646	14
218	-1.989	-2.528	0.539	15
186	-1.988	-2.519	0.519	16
19	1.218	0.599	0.617	17
118	-0.192	-0.806	0.614	18
61	2.326	1.738	0.612	19
289	0.655	0.255	0.398	20
189	0.989	0.360	0.582	21
4	0.339	-0.485	0.578	22
95	1.971	0.527	0.544	23
69	-0.913	-0.513	0.398	24
128	-2.888	-3.371	0.483	25
99	-0.686	-1.183	0.477	26
114	-0.853	-0.514	0.458	27
8	-2.989	-3.367	0.456	28
34	0.135	-0.295	0.430	29
81	2.277	1.866	0.411	30
28	1.981	0.676	0.485	31
13	-0.445	-0.845	0.400	32
85	0.266	-0.131	0.397	33
39	-1.556	-1.951	0.395	34
88	0.267	-0.098	0.365	35
53	0.087	-0.290	0.377	36
98	0.848	0.479	0.369	37
36	0.201	-0.156	0.357	38
116	-0.976	-1.329	0.353	39
24	0.985	0.632	0.352	40
84	2.515	2.264	0.351	41
28	-0.384	-0.718	0.334	42
281	0.780	0.376	0.328	43
125	-0.278	-0.604	0.325	44
282	-0.529	-0.829	0.299	45
25	1.670	1.385	0.286	46
211	-0.593	-0.875	0.283	47
126	-0.874	-1.132	0.258	48
60	2.116	1.878	0.248	49
113	0.851	0.613	0.238	50
112	-2.611	-2.848	0.237	51
121	0.472	0.235	0.237	52
64	0.861	0.636	0.226	53
35	-2.357	-2.569	0.212	54
123	0.567	0.356	0.211	55
186	0.675	0.486	0.189	56
12	0.899	-0.883	0.175	57
89	2.622	2.456	0.167	58

85A40	87	3.	0.558	0.392	0.166	87	0.558	0.392	0.166	59
85AC0	88	3.	-0.749	-0.795	0.045	105	0.446	0.303	0.143	60
838C0	89	9.	-0.913	-0.513	0.588	44	1.344	1.214	0.130	61
838F0	70	12.	-3.172	-2.366	-0.806	97	0.315	0.191	0.124	62
71ABE	71	11.	-1.702	-1.745	-0.036	26	2.481	2.377	0.104	63
71ADA	72	9.	1.253	1.214	0.039	90	1.088	0.951	0.057	64
73D9A	73	21.	1.101	1.775	-0.674	88	-0.749	-0.795	0.045	65
71ACC	74	27.	-1.479	-2.395	0.916	72	1.253	1.214	0.039	66
73C80	75	30.	-3.126	-2.706	-0.420	58	-0.998	-0.129	0.831	67
73CE0	76	16.	-1.818	-1.766	0.759	91	-0.961	-0.978	0.017	68
73CFK	77	38.	2.185	2.595	-0.410	91	1.238	1.239	-0.009	69
73DAH	78	11.	0.268	0.401	-0.134	203	-2.194	-2.173	-0.021	70
73E84	79	11.	-1.895	-1.584	-0.311	39	-0.999	-0.978	-0.021	71
73F8F	80	7.	0.287	-0.098	0.385	71	-1.782	-1.745	-0.036	72
71CAP	81	9.	-2.036	-1.285	-0.781	29	1.591	1.548	-0.048	73
7328G	82	10.	1.428	1.814	-0.426	122	-0.911	-0.854	-0.007	74
73MC0	83	9.	2.665	1.940	0.725	9	-0.786	-0.737	-0.049	75
73LA0	84	5.	2.815	2.264	0.351	98	-3.117	-3.067	-0.050	76
77EZ0	85	1.	0.266	-0.131	0.397	1	-0.522	-0.428	-0.093	77
77DZA	87	2.	-0.726	0.438	-1.164	57	0.654	0.772	-0.118	78
77D80	88	18.	-4.274	-3.784	-0.578	40	0.815	0.935	-0.121	79
78AEA	89	16.	2.622	2.456	0.167	5	-0.992	-0.770	-0.138	80
73KA0	90	3.	0.848	0.479	0.369	78	0.268	0.401	-0.134	81
838AA	91	6.	1.230	1.239	-0.009	86	0.397	0.532	-0.135	82
85CAA	92	6.	1.018	1.239	-0.221	52	0.598	0.742	-0.143	83
858AA	93	6.	-0.723	0.198	-0.921	184	-0.798	-0.622	-0.176	84
81AA0	95	6.	1.071	0.527	0.544	48	1.113	1.299	-0.186	85
81A80	96	6.	1.808	0.951	0.857	65	0.439	0.636	-0.198	86
81AC0	97	8.	0.315	0.191	0.124	92	1.018	1.239	-0.221	87
72AA8	98	28.	-3.117	-3.067	-0.050	43	0.295	0.538	-0.243	88
72ACP	99	9.	-0.588	-1.163	0.477	208	0.789	0.331	-0.243	89
71CA0	100	5.	1.271	0.496	0.775	127	-1.323	-1.071	-0.252	90
72EAA	101	18.	1.135	0.397	0.739	2	-0.174	0.894	-0.268	91
72ECA	102	11.	-0.717	0.060	-0.777	79	-1.895	-1.584	-0.311	92
728P0	103	14.	3.282	2.448	0.834	56	-1.804	-1.478	-0.326	93
71JA0	104	2.	-0.798	-0.622	-0.176	120	-0.424	-0.097	-0.327	94
71LA0	105	2.	0.446	0.303	0.143	19	-0.883	-0.505	-0.377	95
720N0	106	7.	0.675	0.486	0.189	82	1.488	1.814	-0.488	96
72AC8	107	1.	-0.792	0.481	-0.664	77	2.185	2.595	-0.410	97
71718	108	7.	-1.908	-2.319	0.619	75	-3.126	-2.706	-0.420	98
71310	109	5.	0.988	0.399	0.589	119	-0.171	0.317	-0.488	99
72NF0	110	6.	-0.976	-1.329	0.353	37	-0.268	0.268	-0.537	100
72R8P	111	9.	-0.569	-2.892	-0.567	111	-2.569	-2.892	-0.567	101
71JCE	112	8.	-2.611	-2.848	0.237	88	-4.276	-3.704	-0.572	102
72AE8	113	9.	0.851	0.613	0.238	41	-0.128	0.468	-0.596	103
72CC8	114	2.	-0.956	-0.514	0.458	208	-1.809	-1.212	-0.596	104
71Z88	116	9.	-3.297	-2.472	-0.825	78	-3.172	-2.568	-0.606	105
71Z08	117	14.	-4.529	-3.662	-0.863	32	-0.812	-0.180	-0.632	106
858AA	118	3.	-0.192	-0.806	0.614	207	1.723	2.380	-0.657	107
83AF8	119	3.	-0.171	0.317	-0.488	107	-0.292	0.441	-0.734	108
85AA8	120	1.	-0.424	-0.097	-0.327	42	0.964	1.632	-0.667	109
83121	121	3.	0.472	0.235	0.237	73	1.191	1.775	-0.584	110
83AAA	122	6.	-0.911	-0.864	-0.047	59	-0.299	0.419	-0.718	111
85AL8	123	4.	0.587	0.356	0.211	11	-2.545	-1.825	-0.720	112
85AV8	124	8.	0.958	1.958	-0.992	7	-3.237	-2.506	-0.731	113
81A38	125	2.	-0.278	-0.604	0.325	33	-1.293	-0.455	-0.748	114
81AE8	126	5.	-0.874	-1.130	0.256	192	-0.717	0.060	-0.777	115
82AA8	127	3.	-1.323	-1.871	-0.252	81	-2.056	-1.285	-0.781	116
84211	128	11.	-2.888	-3.371	0.483	27	1.042	1.852	-0.811	117
718AP	201	1.	0.798	0.376	0.329	118	-3.297	-2.472	-0.825	118

748C0	282	1.	-0.529	-0.029	0.299	117	-4.529	-3.662	-0.868	119
748E0	283	4.	-2.194	-2.173	-0.921	8	-0.659	0.215	-0.874	120
748G0	284	2.	-0.665	-1.314	0.648	93	-0.723	0.198	-0.921	121
748H0	285	2.	-0.088	0.939	-0.947	285	-0.988	0.039	-0.947	122
65BA0	286	3.	0.889	0.331	-0.243	55	-1.598	-0.638	-0.968	123
73JC0	287	19.	1.723	2.388	-0.657	124	0.858	1.958	-0.992	124
73JF0	288	8.	-1.889	-1.212	-0.596	62	0.899	1.117	-1.018	125
71CA0	2C9	4.	0.655	0.855	0.698	22	-3.586	-2.428	-1.086	126
716A0	210	0.	-1.989	-2.528	0.619	46	-1.652	-0.763	-1.089	127
65AA0	211	3.	-0.593	-0.078	0.283	87	-0.726	0.438	-1.164	128


O&M MODEL RUN68 DEP VAR II LLSCTO
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID


D&H MODEL RUN68 DEP VAR IS LLSCTO
RESIDUAL VS. FITTED Y
-3.784
-0.555
2.595
POSITIVE
RESIDUALS
0
NEGATIVE
-3.784
-0.555
2.595
FITTED Y

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

S&R MODEL RUN76 DEP VAR IS LLSCFD MIN Y = -4.5290 00 MAX Y = 2.3480 00 RANGE Y = 6.8710 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPHA" MODEL

LLSCFD = B(0) + B(1)FIGCOM + B(2)BOMNAV + B(3)BOMCOM + B(4)WT
+ B(5)CO + B(6)DI + B(7)EM + B(8)XT + B(9)SS + B(10)MVO
+ B(11)DVO + B(12)DCC + B(13)DPS + B(14)DUP + B(15)LUP
+ B(16)LVO + B(17)LPO

LLSCFD = LN(LSCFLD)

LSCFLD = FIELD LOGISTICS SUPPORT COST PER OPERATING HOUR

IND,VAR(I)	NAME	COEF,B(I)	S.E. COEF,	T-VALUE	B(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL,IMP,X(I)
0		-8.624710 00							
1	FIGCOM	8.845950-01	2.770-01	3.2	0.1937	0.0	1.0000 00	1.0000 00	0.10
2	BOMNAV	8.936620-01	1.650-01	4.9	0.2458	0.0	1.0000 00	1.0000 00	0.12
3	BOMCOM	8.747580-01	2.120-01	4.1	0.1491	0.0	1.0000 00	1.0000 00	0.13
4	WT	1.328380-02	3.750-03	3.5	0.8251	1.0000 00	1.7370 02	1.7270 02	0.33
5	CO	2.866450-01	4.830-02	4.3	0.3528	4.9230-03	6.6740 00	6.6690 00	0.20
6	DI	-1.349280-02	1.790-03	7.5	0.4713	0.0	1.0000 02	1.0000 02	0.23
7	EM	-2.412790-02	3.840-03	7.9	0.5191	0.0	1.0000 02	1.0000 02	0.35
8	XT	-1.059850-02	3.720-03	2.9	0.5583	0.0	1.0000 02	1.0000 02	0.18
9	SS	-1.157900-02	2.290-03	5.1	0.6326	0.0	1.0000 02	1.0000 02	0.17
10	MVO	-2.942960-04	9.630-05	3.1	0.8917	-1.3830 03	6.8670 03	8.1700 03	0.35
11	DVO	3.874660-06	2.350-06	1.6	0.7281	1.9360 03	2.4780 07	2.4780 07	0.13
12	DCC	-3.893770-08	1.580-08	2.5	0.3556	1.6800 01	2.8230 07	2.8230 07	0.16
13	DPS	-3.334380-04	1.230-04	2.7	0.2279	3.8190 01	2.9720 03	2.9340 03	0.14
14	DUP	6.388320-01	1.710-01	3.7	0.1576	1.7640-01	2.8160 00	1.8480 00	0.17
15	LUP	5.864970-01	5.850-02	10.0	0.6781	5.0380 00	1.3250 01	8.2170 00	0.61
16	LVO	5.944670-01	1.330-01	4.5	0.9888	3.4810 00	9.8120 00	6.8110 00	0.49
17	LPO	8.865450-02	5.810-02	1.6	0.5622	1.0990 00	8.0860 00	6.9880 00	0.09

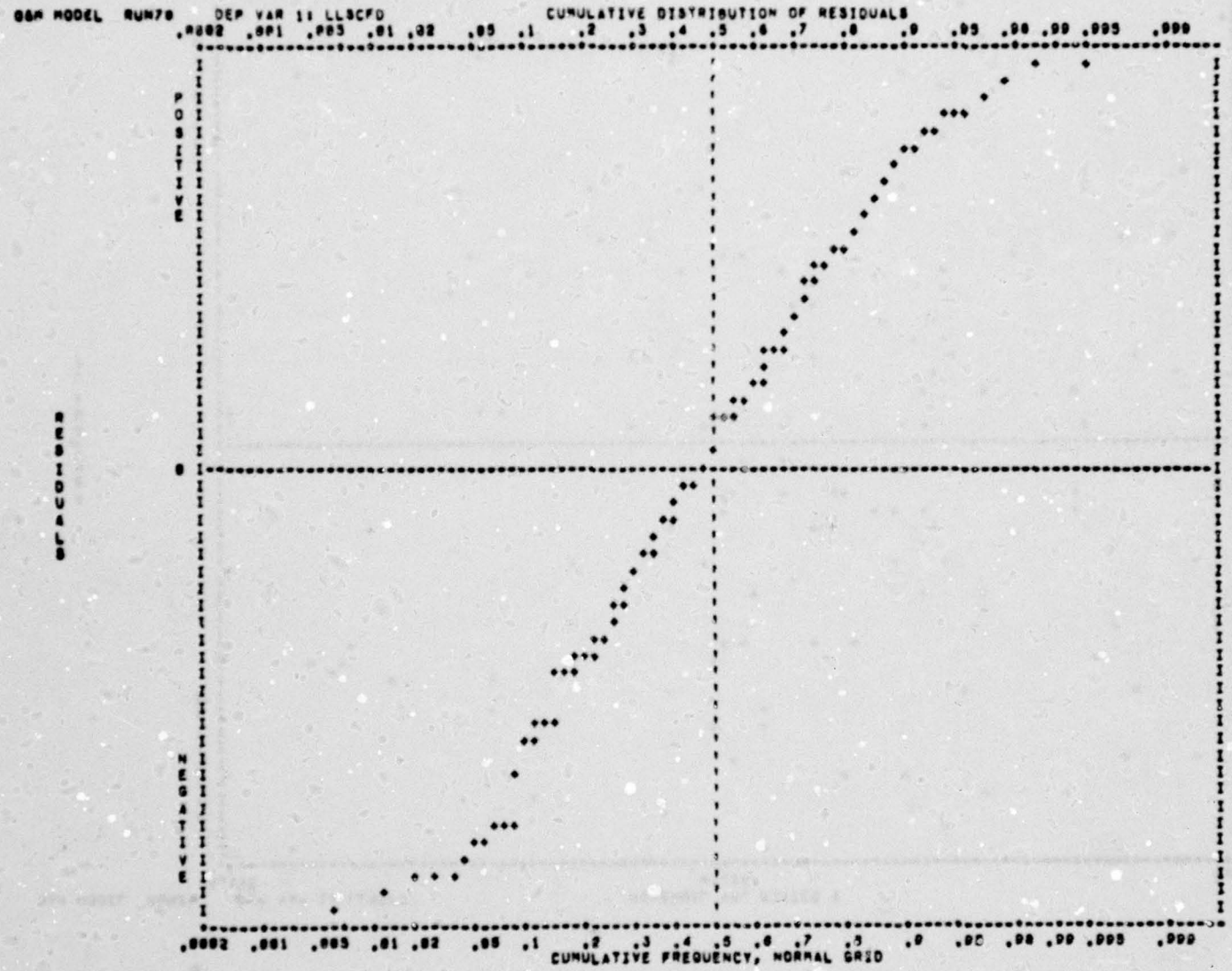
NO. OF OBSERVATIONS	127
NO. OF IND. VARIABLES	17
RESIDUAL DEGREES OF FREEDOM	109
F-VALUE	46.3
RESIDUAL ROOT MEAN SQUARE	0.53582915
RESIDUAL MEAN SQUARE	0.28711286
RESIDUAL SUM OF SQUARES	31.29548396
TOTAL SUM OF SQUARES	257.35638814
MULT. CORREL. COEF. SQUARED	.8784

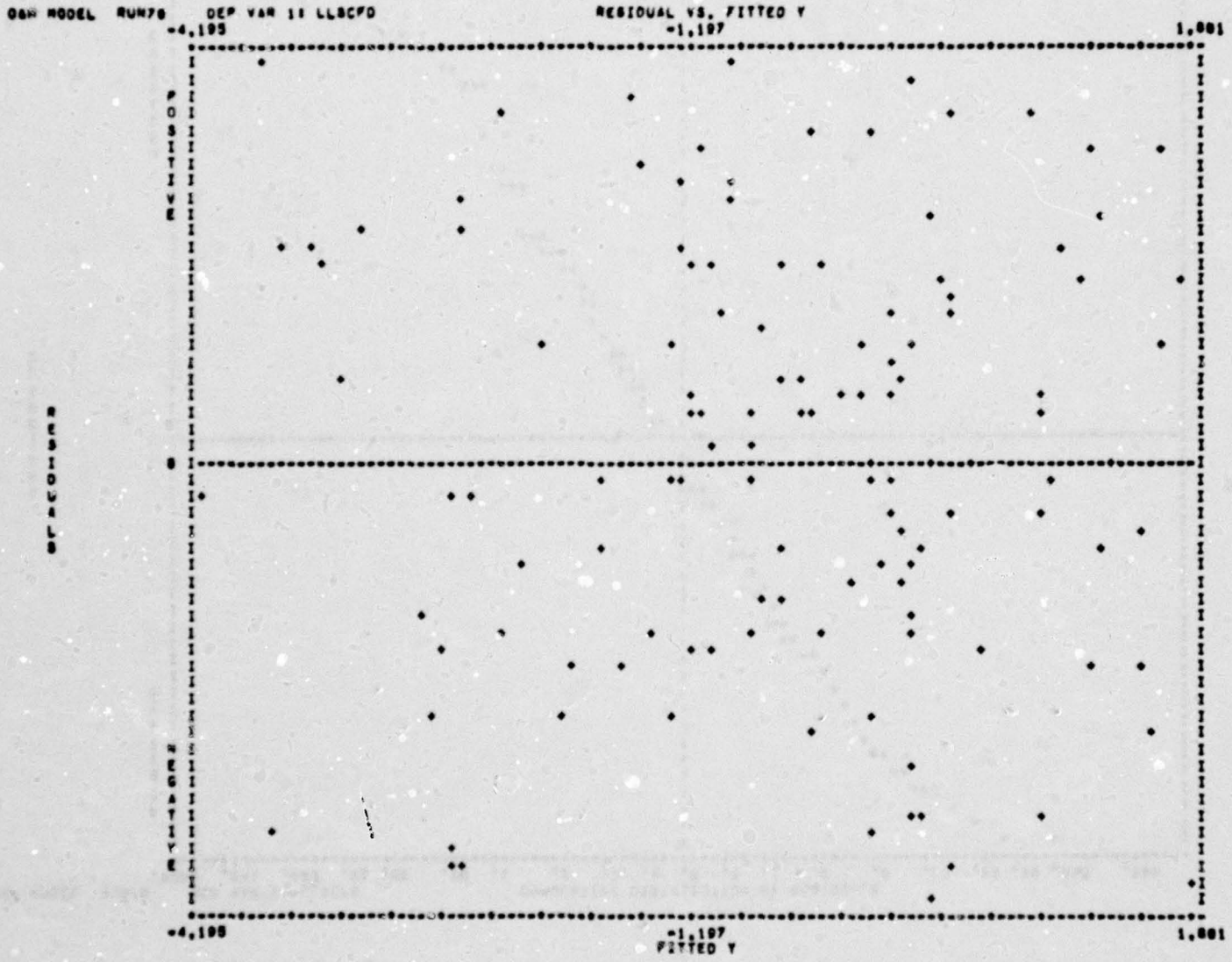
IND,VAR(I)	NAME	COEF,B(I)	MIN X(I)	MAX X(I)	RANGE X(I)	REL,IMP,X(I)
*** COEFFICIENTS FROM PREVIOUS FIT ***						
0		-8.638850 00				
1	FIGCOM	8.344940-01	0.0	1.0000 00	1.0000 00	0.12
2	BOMNAV	8.531950-01	0.0	1.0000 00	1.0000 00	0.12
3	BOMCOM	9.139510-01	0.0	1.0000 00	1.0000 00	0.13
4	WT	1.325940-02	1.0000 00	1.7370 02	1.7270 02	0.33
5	CO	1.999490-01	4.9230-03	6.6740 00	6.6690 00	0.19
6	DI	-1.357690-02	0.0	1.0000 02	1.0000 02	0.20
7	EM	-2.435210-02	0.0	1.0000 02	1.0000 02	0.35
8	XT	-1.132440-02	0.0	1.0000 02	1.0000 02	0.16
9	SS	-1.163120-02	0.0	1.0000 02	1.0000 02	0.17
10	MVO	-2.741780-04	-1.3830 03	6.8670 03	8.1700 03	0.33
11	DVO	3.583690-06	1.9360 03	2.4780 07	2.4780 07	0.13
12	DCC	-3.849440-08	1.6800 01	2.8230 07	2.8230 07	0.16
13	DPS	-3.882410-04	3.8190 01	2.9720 03	2.9340 03	0.13
14	DUP	6.587840-01	1.7640-01	2.8160 00	1.8480 00	0.18
15	LUP	5.288850-01	5.0380 00	1.3250 01	8.2170 00	0.62
16	LVO	5.472870-01	3.4810 00	9.8120 00	6.8110 00	0.43
17	LPO	1.191980-01	1.0990 00	8.0860 00	6.9880 00	0.12

RESIDUAL ROOT MEAN SQUARE	0.53862869
RESIDUAL MEAN SQUARE	0.29011224
RESIDUAL SUM OF SQUARES	31.62223468
TOTAL SUM OF SQUARES	257.35638814
MULT. CORREL. COEF. SQUARED	.8778

ORDERED BY COMPUTER INPUT						ORDERED BY RESIDUALS				
IDENT,	OBSV,	NSS DISTANCE	OBS, Y	FITTED Y	RESIDUAL	OBSV,	OBS, Y	FITTED Y	ORDERED RESID,	SEQ
71B2B	1	1,	-P.711	-P.PP3	P,P91	58	-2.821	-3.776	P,955	1
71L4B	2	3,	-P.273	-P.923	P.P5P	69	-P.P2P	-P.956	P,936	2
71PAB	4	1,	-P.469	-P.784	P,315	191	1.P13	P.133	P,68P	3
71PBB	5	3,	-1.P22	-1.P35	P.P14	99	-P.686	-1.561	P,P75	4
71710	6	13,	-2.969	-3.465	P,496	25	1.67P	P.843	P,828	5
724G0	7	7,	-3.535	-2.601	-P.934	74	-1.527	-2.336	P,808	6
71G50	8	2,	-P.783	P.131	-P.P54	189	1.147	P.341	P,805	7
71FA0	9	5,	-1.367	-1.253	-P.P54	31	P.3P6	-P.461	P,787	8
71CA0	11	4,	-2.545	-1.955	-P.598	196	P.675	-P.P21	P,766	9
710AP	12	2,	-1.P96	-P.464	-P.632	29	-P.384	-1.135	P,751	10
51EA0	13	4,	-P.758	-1.256	P,498	84	2.342	1.683	P,739	11
52AA0	14	4,	-P.596	-1.264	P,669	68	1.912	1.186	P,726	12
52480	15	6,	-P.697	-1.153	P,456	284	-P.788	-1.493	P,704	13
74JA0	18	22,	-P.P35	P.184	-P.219	14	-P.596	-1.264	P,669	14
74JC0	19	5,	-1.P92	-P.758	-P.342	125	-P.278	-P.924	P,646	15
52GA1	2P	P,	-P.384	-1.135	P,751	219	-1.999	-2.545	P,636	16
71ZA2	21	3,	-1.847	-1.434	-P,413	118	-P.328	-P.951	P,623	17
71Z8P	22	P,	-3.5P6	-2.558	-P.948	61	1.867	1.286	P,582	18
71ZC0	23	15,	-3.121	-3.617	P.497	169	P.82P	P.251	P,569	19
73EGP	24	8,	-P.927	P.P29	-P.956	112	-2.611	-3.153	P,543	2P
73EPP	25	13,	1.675	P.843	P,828	188	-2.PP4	-2.842	P,538	21
73MAP	26	16,	2.147	1.733	P,413	29	1.5P1	1.PP1	P,5PP	22
73MC0	27	7,	1.842	1.273	-P,231	13	-P.758	-1.256	P,498	23
73NA0	28	17,	-P.P6P	-P.192	P,124	23	-3.121	-3.617	P,497	24
73QBP	29	6,	1.5P1	1.PP1	P,5PP	6	-2.969	-3.465	P,496	25
73XPP	31	3,	P.3P5	-P.461	P,767	36	-P.17P	-P.648	P,478	26
73KEP	32	3,	-P.812	-P.387	-P,425	211	-P.593	-1.P63	P,47P	27
73KF0	33	1,	-1.283	-P.885	-P,398	34	P.P43	-P.415	P,462	28
73KK0	34	5,	P.P45	-2.416	P,462	35	-P.697	-1.153	P,456	29
75930	35	8,	-3.149	-2.681	-P,468	128	-2.919	-3.374	P,454	3P
748D6	36	3,	-P.17P	-P.648	P,478	83	1.545	1.127	P,417	31
748F0	37	7,	-3.429	-P.617	P,188	98	P.729	P.295	P,415	32
74810	38	22,	-2.575	-2.475	-P,1PP	26	2.147	1.733	P,413	33
78A10	39	3,	-1.949	-1.152	P,183	64	P.714	P.349	P,365	34
78GA0	4P	P,	-P.121	P.123	-P,244	281	P.329	-P.P17	P,345	35
74FF0	41	17,	-P.12P	P.P45	-P,165	44	P.7P1	P.362	P,348	36
74FA0	42	32,	P.912	1.578	-P,664	282	-P.67P	-P.995	P,326	37
74FH0	43	4,	P.229	P.347	-P,127	4	-P.469	-P.784	P,315	38
74FU0	44	35,	P.7P1	P.362	P,34P	128	-1.P18	-1.297	P,28P	39
73CG0	45	23,	-1.87P	-1.278	-P,592	71	-1.782	-2.P48	P,267	4P
73PC0	46	7,	P.935	P.97P	-P,P35	97	P.118	-P.148	P,266	41
74FJ0	49	2,	P.243	P.P4P	P,2P4	78	P.P88	-P.172	P,26P	42
74FK0	5P	P,	-2.821	-3.776	P,955	57	P.4P7	P.16P	P,247	43
74FQ0	51	25,	1.318	1.338	-P,P2P	77	1.874	1.629	P,246	44
74KA0	52	6,	P.51P	P.512	-P,PP2	49	P.243	P.P4P	P,2P4	45
74KC0	53	5,	-P.P48	-P.P41	-P,2P6	37	-P.429	-P.617	P,188	46
74C8P	55	5,	-1.635	-1.172	-P,463	229	-P.345	-P.525	P,181	47
74CC0	56	5,	-1.934	-1.7P4	-P,229	98	-3.117	-3.293	P,176	48
74FA1	57	11,	P.4P7	P.16P	P,247	121	P.251	P.P81	P,17P	49
74EBP	58	4,	-P.398	-P.519	P,121	72	1.P92	P.933	P,159	5P
73PH0	59	2,	-P.298	P.113	-P,411	8P	-P.127	-P.285	P,157	51
73P8P	6P	19,	1.912	1.186	P,726	113	P.17P	P.P24	P,154	52
73PD0	61	24,	1.867	1.286	P,582	11P	-1.P58	-1.2P1	P,144	53
73PF0	62	15,	P.P99	P.5P8	-P,461	28	-P.P68	-P.192	P,124	54
73PH0	63	3,	-P.167	-P.P93	-P,P74	58	-P.398	-P.519	P,121	55
71NA0	64	4,	P.714	P.349	P,365	91	1.P51	P.934	P,11P	56
71GU0	65	4,	P.239	P.349	-P,11P	85	-P.365	-P.481	P,11P	57
63AA0	66	3,	P.275	P.27P	-P,P21	122	-P.998	-1.1P1	P,1P6	58
65AA5	67	4,	-P.224	P.148	-P,37P	39	-1.P49	-1.152	P,1P3	59
63AG0	68	4,	-1.512	-1.P57	-P,455	1	-P.711	-P.8P3	P,P91	6P
635C0	69	9,	-P.P28	-P.958	P,938	12P	-P.455	-P.54P	P,P85	61
638F0	7P	14,	-3.172	-2.815	-P,357	114	-P.828	-P.852	P,P24	62
71A8E	71	P,	-1.782	-2.P48	P,267	5	-1.P22	-1.P36	P,P14	63

71AD4	72	9.	1.992	0.933	0.159	105	-0.125	-0.126	0.001	64
73D8A	73	19.	0.696	1.203	-0.507	66	0.276	0.278	-0.001	65
71ACC	74	28.	-1.527	-2.336	0.808	52	0.510	0.512	-0.002	66
73C8Q	75	34.	-3.357	-2.742	-0.615	51	1.310	1.338	-0.028	67
73CEN	76	25.	-2.732	-2.621	-0.111	48	0.935	0.970	-0.035	68
73CFK	77	27.	1.874	1.629	0.246	104	-0.843	-0.801	-0.042	69
73DAM	78	14.	0.988	-0.172	0.260	9	-1.307	-1.253	-0.054	70
73E9A	79	11.	-2.371	-1.892	-0.479	29	-0.827	0.029	-0.056	71
73E8F	80	6.	-0.127	-0.285	0.157	127	-1.355	-1.298	-0.057	72
71CA8	81	7.	-2.866	-1.582	-0.483	208	-1.809	-1.737	-0.072	73
73EG0	82	11.	0.065	0.923	-0.858	93	-0.167	-0.093	-0.074	74
73MC0	83	0.	1.545	1.127	0.417	88	-4.274	-4.195	-0.080	75
73LA0	84	4.	2.342	1.883	0.739	58	-2.575	-2.475	-0.100	76
77EC8	85	1.	-0.365	-0.481	0.116	70	-2.732	-2.621	-0.111	77
7708B	86	29.	-4.274	-4.195	-0.080	80	0.819	0.934	-0.115	78
76AEA	89	15.	1.007	1.484	-0.477	96	-0.992	0.027	-0.119	79
73KA0	90	3.	0.709	0.295	0.415	65	0.230	0.349	-0.119	80
839AA	91	7.	1.851	0.934	0.118	43	0.228	0.347	-0.127	81
83CAA	92	7.	0.819	0.934	-0.115	41	-0.120	0.045	-0.165	82
858AA	93	5.	-0.990	-0.299	-0.891	207	1.332	1.507	-0.174	83
81AA0	95	5.	-0.268	0.042	-0.310	53	-0.848	-0.641	-0.206	84
81A90	96	5.	-0.890	0.027	-0.119	18	-0.935	0.184	-0.219	85
814C0	97	8.	0.118	-0.148	0.266	56	-1.934	-1.704	-0.229	86
72AA0	98	23.	-3.117	-3.293	0.176	27	1.042	1.273	-0.231	87
72AC0	99	11.	-0.686	-1.561	0.875	49	-0.121	0.123	-0.244	88
71CA0	100	6.	1.147	0.341	0.805	2	-0.273	-0.023	-0.250	89
72EAA	101	17.	1.813	0.133	0.680	203	-2.451	-2.191	-0.260	90
72ECA	102	12.	-0.589	0.244	-1.054	123	-0.548	-0.253	-0.295	91
728P0	103	13.	0.756	1.801	-1.013	95	-0.268	0.042	-0.310	92
71JA0	104	2.	-0.843	-0.801	-0.042	205	-0.971	-0.638	-0.333	93
71LA0	105	3.	-0.125	-0.126	0.001	19	-1.992	-0.758	-0.342	94
720N0	106	8.	0.675	-0.991	0.766	70	-3.172	-2.815	-0.357	95
72ACP	107	2.	-0.768	-0.116	-0.592	87	-0.224	0.148	-0.370	96
71718	108	7.	-2.884	-2.542	0.538	33	-1.293	-0.895	-0.398	97
71310	109	7.	0.828	0.230	0.569	111	-2.718	-2.289	-0.491	98
72PP0	110	7.	-1.856	-1.281	0.144	59	-0.298	0.113	-0.411	99
72980	111	14.	-2.718	-2.309	-0.401	21	-1.847	-1.434	-0.413	100
71JCE	112	11.	-2.611	-3.153	0.543	32	-0.812	-0.387	-0.425	101
72AE0	113	10.	0.178	0.024	0.154	68	-1.512	-1.057	-0.455	102
72CC0	114	3.	-0.828	-0.852	0.024	62	0.099	0.560	-0.461	103
71Z80	116	9.	-3.583	-2.691	-0.892	55	-1.635	-1.172	-0.463	104
71ZD0	117	15.	-4.529	-3.661	-0.869	35	-3.149	-2.681	-0.468	105
859AA	118	3.	-0.328	-0.951	0.623	89	1.007	1.484	-0.477	106
83AF0	119	4.	-0.589	0.142	-0.731	79	-0.371	-1.892	-0.479	107
83AA0	120	1.	-0.455	-0.542	0.085	81	-2.866	-1.582	-0.483	108
83121	121	4.	0.251	0.081	0.170	73	0.696	1.203	-0.507	109
83AAA	122	7.	-0.996	-1.101	0.105	11	-2.545	-1.955	-0.590	110
85AL0	123	5.	-0.548	-0.253	-0.295	107	-0.788	-0.116	-0.592	111
85AV0	124	8.	-0.612	0.345	-0.958	46	-1.870	-1.278	-0.592	112
81AA2	125	2.	-0.278	-0.924	0.646	75	-3.357	-2.742	-0.615	113
81AE0	126	8.	-1.818	-1.297	0.288	12	-1.998	-0.464	-0.832	114
82AA0	127	3.	-1.355	-1.298	-0.057	42	0.912	1.576	-0.664	115
84211	128	11.	-2.919	-3.374	0.454	119	-0.589	0.142	-0.731	116
71BA2	201	1.	0.329	-0.817	0.345	8	-0.793	0.131	-0.924	117
749CA	202	1.	-0.670	-0.995	0.326	206	-0.687	0.168	-0.855	118
748E0	203	4.	-2.451	-2.191	-0.260	82	0.265	0.923	-0.858	119
748G0	204	2.	-0.788	-1.493	0.704	117	-4.529	-3.661	-0.869	120
748H0	205	2.	-0.971	-0.638	-0.333	93	-0.992	-0.099	-0.891	121
858A2	206	3.	-0.687	0.168	-0.855	7	-3.535	-2.681	-0.934	122
73JC0	207	16.	1.332	1.507	-0.174	22	-3.586	-2.558	-0.948	123
73JF0	208	8.	-1.889	-1.737	-0.972	124	-0.612	0.345	-0.958	124
71CA8	209	5.	-0.345	-0.826	0.181	116	-3.583	-2.681	-0.982	125
719A0	210	0.	-1.989	-2.545	0.636	103	0.788	1.301	-1.013	126
89AA0	211	3.	-0.593	-1.083	0.470	103	-0.889	0.244	-1.054	127


BBN MODEL RUN78 DEP VAR 11 LLSCFD
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .0P1 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID


OSH MODEL RUN78 DEP VAR IS LLSCFD
RESIDUAL VS. FITTED Y
-4,195
-1,197
1,801
POSITIVE
RESIDUALS
0
NEGATIVE
-4,195
-1,197
FITTED Y
1,801

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN88 DEP VAR IS NRTS MIN Y = 0.0 MAX Y = 1.0000 02 RANGE Y = 1.0000 02

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPOS" MODEL
NRTS = B(0) + B(1)VO + B(2)OI + B(3)UF + B(4)MUP + B(5)MWT
+ B(6)MEM + B(7)MXT + B(8)DWT + B(9)OCC + B(10)DEM
+ B(11)DXT + B(12)LVO + B(13)LWT
NRTS = FRACTION NOT REPAIRABLE THIS STATION

IND.VAR(I)	NAME	COEF.B(I)	S.E. COEF.	T-VALUE	R(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL.INF.X(I)
0		-3.564[RD 01							
1	VO	4.299970-03	1.510-03	2.9	0.8468	3.8880 01	8.2880 03	8.1640 03	0.35
2	OI	1.239770-01	2.850-02	4.4	0.3377	0.0	1.0880 02	1.0880 02	0.12
3	UF	-2.563490 00	1.610 00	1.7	0.1399	3.1880 00	2.8880 00	2.8880 00	0.07
4	MUP	-2.519730-05	1.430-05	1.8	0.2677	-3.9680 04	5.2670 05	5.6630 05	0.14
5	MWT	-5.432350-01	1.020-01	5.3	0.9223	-3.2180 01	1.4860 02	1.7270 02	0.94
6	MEM	4.823570-01	4.110-02	9.8	0.2063	-9.6980 00	9.8310 01	1.0880 02	0.48
7	MXT	2.327880-01	6.590-02	3.5	0.5247	-8.5880 00	9.1520 01	1.0880 02	0.23
8	DWT	2.518570-03	9.210-04	2.7	0.6844	0.6180 00	1.1410 04	1.1400 04	0.29
9	OCC	5.781590-07	2.910-07	2.0	0.3891	8.1880 01	2.7890 07	2.7890 07	0.16
10	DEM	1.156860-02	1.610-03	7.2	0.8784	2.5910 01	3.1260 03	3.1080 03	0.36
11	DXT	3.787690-03	1.530-03	2.5	0.9671	3.8830 02	3.3860 03	3.0980 03	0.11
12	LVO	-6.489550 00	3.430 00	1.9	0.9652	3.5840 00	9.8120 00	8.4280 00	0.35
13	LWT	1.724350 01	4.180 00	4.1	0.9574	0.0	9.1570 00	9.1570 00	0.00

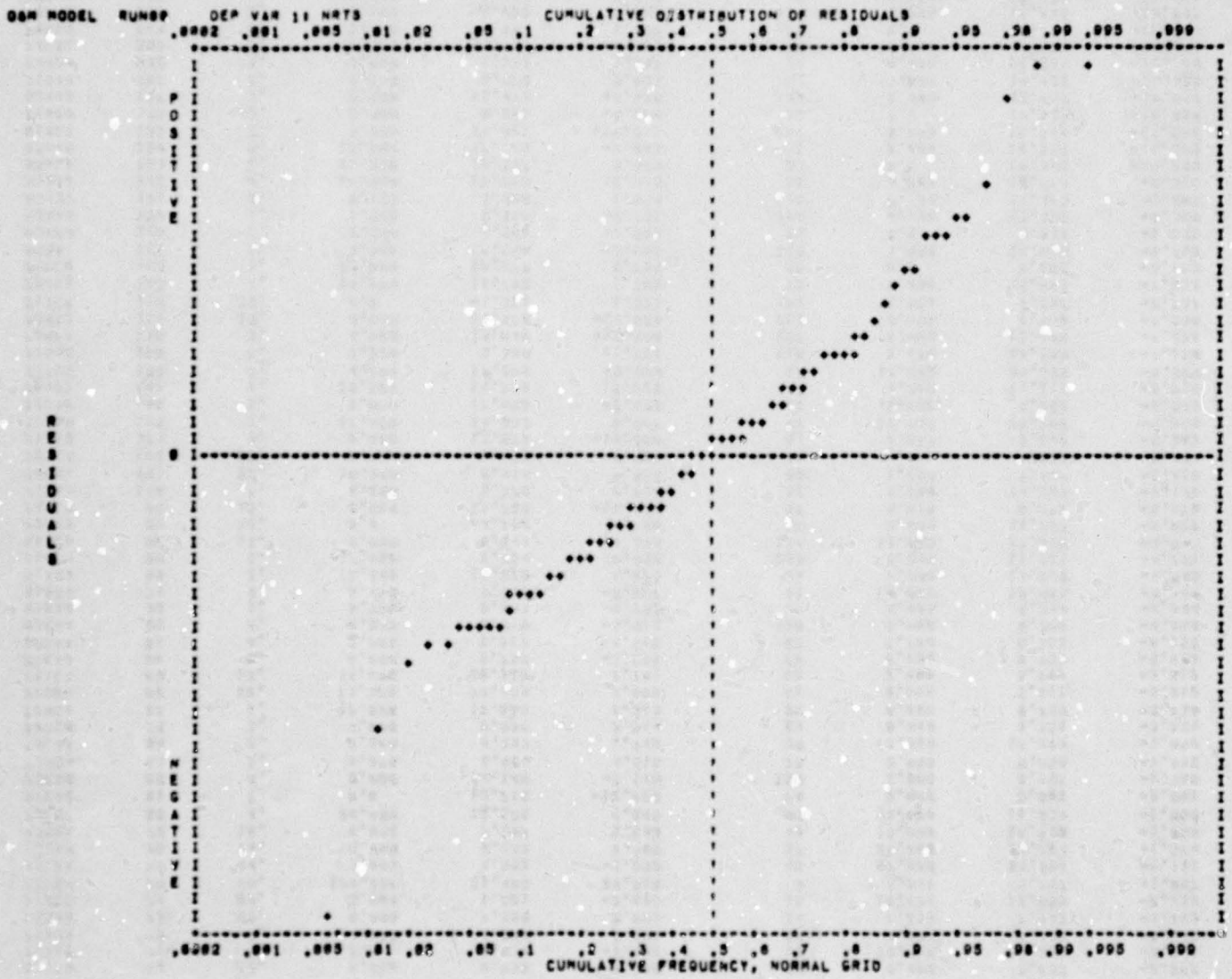
NO. OF OBSERVATIONS	127
NO. OF IND. VARIABLES	13
RESIDUAL DEGREES OF FREEDOM	113
F-VALUE	16.5
RESIDUAL ROOT MEAN SQUARE	9.81711628
RESIDUAL MEAN SQUARE	96.37577171
RESIDUAL SUM OF SQUARES	10890.46228291
TOTAL SUM OF SQUARES	31574.68653142
MULT. CORREL. COEF. SQUARED	.6551

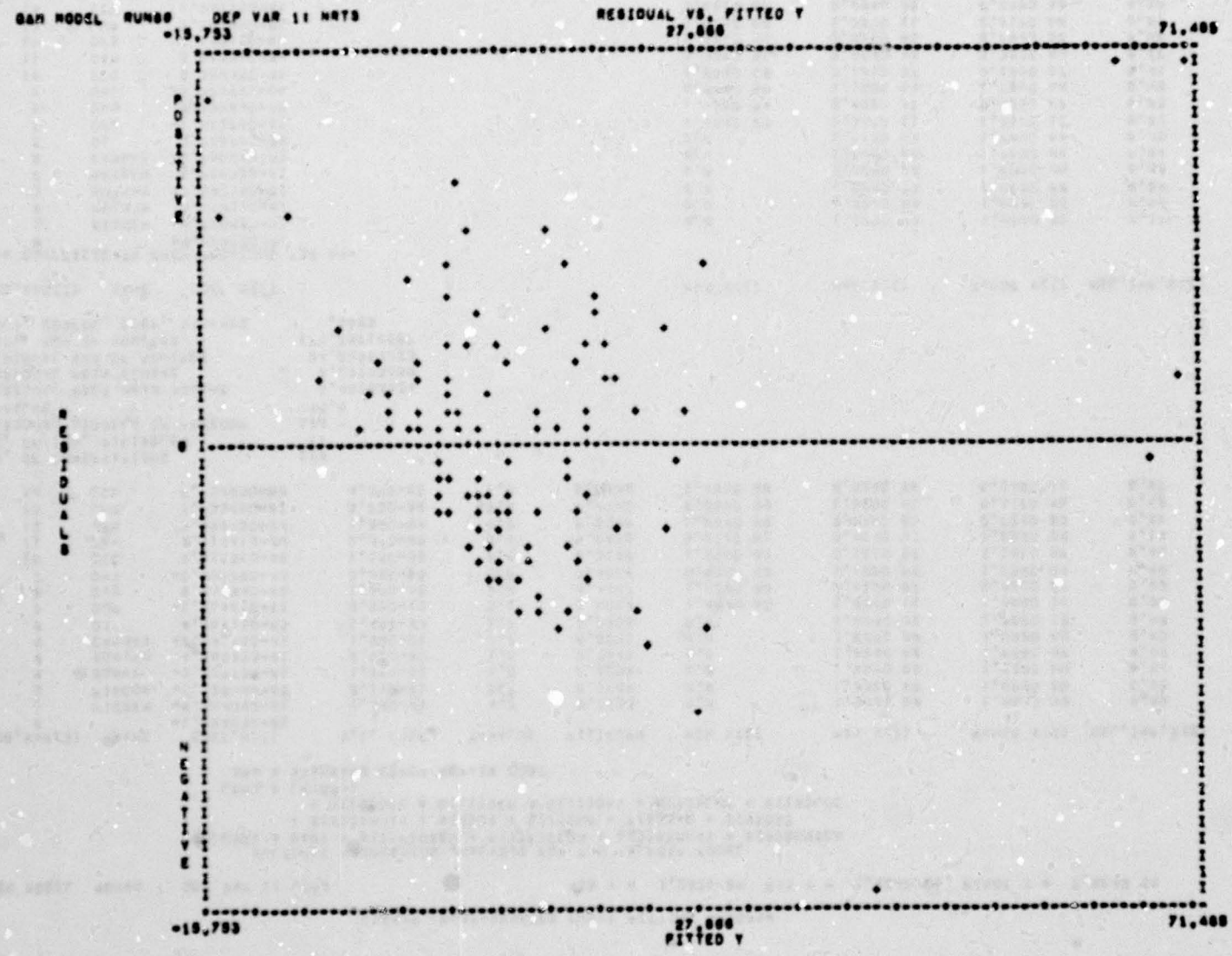
IND.VAR(I)	NAME	COEF.B(I)	MIN X(I)	MAX X(I)	RANGE X(I)	REL.INF.X(I)
••• COEFFICIENTS FROM PREVIOUS FIT •••						
0		-4.253530 01				
1	VO	3.992510-03	3.8880 01	8.2880 03	8.1640 03	0.33
2	OI	1.278810-01	0.0	1.0880 02	1.0880 02	0.13
3	UF	-3.272910 00	3.0880-01	3.1880 00	2.8880 00	0.09
4	MUP	-2.486160-05	-3.9680 04	5.2670 05	5.6630 05	0.14
5	MWT	-5.755180-01	-3.2180 01	1.4860 02	1.7270 02	0.99
6	MEM	3.939420-01	-9.6980 00	9.8310 01	1.0880 02	0.39
7	MXT	2.438350-01	-8.5880 00	9.1520 01	1.0880 02	0.24
8	DWT	2.658810-03	0.6180 00	1.1410 04	1.1400 04	0.30
9	OCC	6.013770-07	8.1880 01	2.7890 07	2.7890 07	0.18
10	DEM	1.223260-02	2.5910 01	3.1260 03	3.1080 03	0.38
11	DXT	4.195890-03	3.8830 02	3.3860 03	3.0980 03	0.13
12	LVO	-5.782480 00	3.5840 00	9.8120 00	8.4280 00	0.31
13	LWT	1.756760 01	0.0	9.1570 00	9.1570 00	0.01

RESIDUAL ROOT MEAN SQUARE	9.84951955
RESIDUAL MEAN SQUARE	97.01482795
RESIDUAL SUM OF SQUARES	10962.67523862
TOTAL SUM OF SQUARES	31574.68653142
MULT. CORREL. COEF. SQUARED	.6526

ORDERED BY COMPUTER INPUT						ORDERED BY RESIDUALS				
IDENT,	OBSV,	NBR DISTANCE	OBS, Y	FITTED Y	RESIDUAL	OBSV,	OBS, Y	FITTED Y	ORDERED RESID,	SEQ
71920	1	2,	13,000	6,257	6,743	70	100,000	71,485	28,515	1
71L80	2	2,	27,000	7,303	19,697	38	93,000	65,238	27,778	2
71M60	3	9,	16,000	29,216	-13,216	26	10,000	-15,753	25,753	3
71PK0	4	2,	11,000	5,952	5,048	2	27,000	7,303	19,697	4
71P80	5	2,	6,000	577	5,423	7	4,000	-13,472	17,472	5
71710	6	14,	9,000	8,770	230	207	9,000	-7,366	16,366	6
724G0	7	31,	4,000	-13,472	17,472	52	24,000	7,994	16,006	7
71G50	8	3,	4,000	5,887	-1,887	107	30,000	14,778	15,222	8
71FA0	9	3,	25,000	22,629	2,371	51	23,000	7,867	15,133	9
71F90	10	10,	10,000	22,952	-12,952	48	20,000	6,226	13,774	10
71C40	11	8,	10,000	10,298	-298	40	42,000	28,913	13,087	11
71DA0	12	1,	17,000	11,464	5,536	122	30,000	17,055	12,945	12
71E40	13	2,	14,000	20,989	-6,989	49	15,000	2,918	12,082	13
72AA0	14	4,	20,000	18,639	1,361	69	31,000	19,686	11,314	14
72A90	15	4,	25,000	20,209	4,791	98	17,000	6,164	10,836	15
74JA0	18	18,	29,000	27,413	1,587	123	29,000	19,337	9,663	16
74JC0	19	2,	26,000	18,569	7,431	78	18,000	9,105	8,895	17
72G41	20	7,	2,000	8,392	-6,392	88	24,000	15,151	8,849	18
73EG0	24	4,	7,000	11,508	-4,508	36	5,000	-3,550	8,550	19
73EP0	25	3,	2,000	14,272	-12,272	89	33,000	25,259	7,741	20
73MA0	26	13,	10,000	-15,753	25,753	101	16,000	9,414	7,586	21
73MC0	27	1,	4,000	9,070	-5,070	19	26,000	18,569	7,431	22
73NA0	28	11,	8,000	27,692	-19,692	43	14,000	6,807	7,193	23
73Q80	29	1,	6,000	9,331	-3,331	67	18,000	11,131	6,869	24
735C0	30	9,	10,000	10,858	-858	1	13,000	6,257	6,743	25
73X80	31	8,	8,000	10,582	-10,582	114	27,000	20,277	6,723	26
73XE0	32	10,	8,0	5,667	-5,667	58	17,000	10,304	6,696	27
73XF0	33	10,	8,0	10,843	-10,843	87	17,000	10,385	6,615	28
73XK0	34	2,	7,000	7,742	-742	53	24,000	17,985	6,015	29
75930	35	14,	9,0	8,165	-8,165	201	9,100	3,476	5,624	30
74BD0	36	9,	5,000	-3,550	8,550	12	17,000	11,464	5,536	31
74BF0	37	19,	25,000	23,374	1,374	5	6,000	577	5,423	32
74B10	38	19,	93,000	69,238	27,778	208	0,0	-5,151	5,151	33
78A10	39	2,	0,0	10,636	-10,636	4	11,000	5,952	5,048	34
78GA0	40	2,	42,000	28,913	13,087	15	25,000	20,209	4,791	35
74FF0	41	5,	19,000	25,268	-6,268	98	0,0	-4,766	4,766	36
74FA0	42	98,	15,000	16,868	-1,868	88	75,000	70,305	4,695	37
74FH0	43	2,	14,000	6,807	7,193	65	8,000	3,484	4,516	38
74FU0	44	47,	10,000	43,722	-33,722	47	25,000	20,736	4,264	39
73CR0	45	8,	10,000	11,934	-1,934	206	13,300	9,488	3,812	40
73CG0	46	19,	67,000	68,121	-1,121	205	2,100	-0,922	3,022	41
659HR	47	2,	25,000	20,736	4,264	85	9,000	6,086	2,914	42
74FC0	48	1,	20,000	6,226	13,774	50	4,000	1,213	2,787	43
74FJ0	49	1,	15,000	2,918	12,082	105	17,000	14,333	2,667	44
74FK0	50	17,	17,000	18,304	-1,304	9	25,000	22,629	2,371	45
74F00	51	75,	23,000	7,867	15,133	88	21,000	18,667	2,333	46
74KA0	52	2,	24,000	7,994	16,006	204	2,000	0,080	1,920	47
74KC0	53	2,	24,000	17,985	6,015	121	8,100	6,220	1,880	48
74CA0	54	2,	3,000	14,838	-11,838	84	8,600	6,858	1,742	49
74C80	55	4,	9,000	16,833	-7,833	100	5,000	3,389	1,611	50
74CC0	56	11,	3,000	12,518	-9,518	18	29,000	27,413	1,587	51
74FA1	57	7,	4,300	11,116	-6,816	14	20,000	18,639	1,361	52
74E80	58	2,	14,000	17,000	-3,000	112	0,0	-1,321	1,321	53
73PH0	59	1,	8,000	13,027	-5,027	202	2,000	1,553	1,247	54
73PH0	60	7,	4,000	1,213	2,787	113	15,000	13,792	1,208	55
73PD0	61	64,	14,000	18,488	-4,488	95	17,000	15,929	1,071	56
73PF0	62	8,	3,000	9,248	-6,248	86	10,000	8,945	1,055	57
73PM0	63	2,	1,000	6,489	-5,489	79	8,000	7,107	893	58
71NA0	64	2,	4,000	5,332	-1,332	72	4,000	3,299	701	59
71QU0	65	2,	5,200	5,332	-132	108	4,000	3,376	624	60
63AA0	66	1,	10,000	8,945	1,055	73	8,000	7,399	601	61
65AA0	67	3,	18,000	11,131	6,869	102	6,000	5,699	318	62
63AG0	68	2,	21,000	18,667	2,333	6	9,000	8,770	230	63
638C0	69	4,	31,000	19,686	11,314	85	5,200	5,332	-132	64

638F0	70	25.	5,000	9,938	-3,938	94	5,400	5,697	-0,297	65
71A8E	71	7.	0.0	9,938	-9,938	11	10,000	10,298	-0,298	66
71A0A	72	7.	4,000	3,299	0,701	64	4,000	5,332	-0,532	67
73DBA	73	25.	0,000	7,399	0,601	34	7,000	7,742	-0,742	68
71ACC	74	20.	3,000	5,601	-2,601	38	16,000	16,858	-0,858	69
73CEN	76	20.	100,000	71,485	28,515	0	4,000	5,087	-1,087	70
73CFR	77	44.	3,000	5,632	-2,952	46	67,000	68,121	-1,121	71
73DAH	78	14.	10,000	9,105	0,895	37	25,000	26,374	-1,374	72
73E0A	79	16.	6,000	7,107	0,893	42	15,000	16,860	-1,860	73
73E0F	80	4.	24,000	15,151	8,849	45	10,000	11,934	-1,934	74
71C40	81	7.	0.0	12,716	-12,716	74	3,000	5,001	-2,001	75
73C80	82	4.	9,000	14,148	-5,148	119	2,000	5,588	-2,988	76
73HC0	83	3.	8,000	3,484	4,516	77	3,000	5,952	-2,952	77
73L40	84	2.	8,000	6,658	1,342	56	14,000	17,098	-3,098	78
77EC0	85	3.	9,000	6,086	2,914	29	6,000	9,331	-3,331	79
77DC4	87	1.	17,000	10,385	6,615	94	6,000	9,739	-3,739	80
77D80	86	22.	75,000	70,305	4,695	91	2,000	5,912	-3,912	81
78AEA	89	26.	33,000	25,259	7,741	92	2,000	5,912	-3,912	82
73K40	90	2.	6,000	9,739	-3,739	78	6,000	9,938	-3,938	83
638A4	91	4.	2,000	5,912	-3,912	93	5,700	9,853	-4,153	84
63CA4	92	4.	2,000	5,912	-3,912	126	5,000	9,288	-4,288	85
65B44	93	1.	5,700	9,853	-4,153	97	4,000	8,344	-4,344	86
61B9A	94	4.	5,400	9,697	-4,297	61	14,000	18,468	-4,468	87
61A40	95	3.	17,000	15,929	1,071	24	7,000	11,598	-4,598	88
61A50	96	5.	17,000	6,164	10,836	203	6,500	11,231	-4,731	89
61AC0	97	13.	4,000	8,344	-4,344	124	13,000	17,945	-4,945	90
72AA0	98	38.	0.0	-4,766	4,766	59	6,000	11,027	-5,027	91
72AC0	99	15.	8,000	12,738	-12,138	27	4,000	9,078	-5,078	92
71CA0	100	7.	4,000	3,376	8,624	82	9,000	14,148	-5,148	93
72EAA	101	23.	16,000	8,414	7,586	83	1,000	6,489	-5,489	94
72EC0	102	10.	6,000	5,690	8,310	32	0.0	5,687	-5,687	95
71J30	104	3.	2,000	12,658	-10,658	82	3,000	9,248	-6,248	96
71L40	105	1.	17,000	14,133	2,867	41	19,000	25,268	-6,268	97
72DN0	106	3.	5,000	17,493	-9,493	80	2,000	8,592	-6,592	98
72AC0	107	1.	30,000	14,778	15,222	57	4,300	11,116	-6,816	99
71710	106	7.	4,000	13,389	-9,389	13	14,000	20,989	-6,989	100
7331D	109	7.	5,000	3,389	1,611	118	3,000	10,168	-7,168	101
72RF0	110	3.	4,000	16,848	-12,848	127	6,000	13,478	-7,478	102
72R90	111	13.	9,000	23,676	-14,676	211	8,000	8,398	-7,598	103
71JC0	112	38.	0.0	-1,321	1,321	128	1,000	9,537	-7,737	104
72AE0	113	7.	15,000	13,792	1,208	55	9,000	16,833	-7,833	105
72CC0	114	1.	27,000	20,277	6,723	35	0.0	8,165	-8,165	106
65B44	110	1.	3,000	10,160	-7,160	210	1,000	10,512	-8,712	107
63AF0	119	5.	2,000	5,588	-2,988	71	0.0	9,838	-9,838	108
63640	120	3.	1,000	9,537	-7,737	180	4,000	13,389	-9,389	109
63121	121	4.	0,100	8,220	1,880	176	8,000	17,483	-9,483	110
63AAA	122	6.	30,000	17,855	12,945	56	3,000	12,518	-9,518	111
55AL0	123	2.	29,000	19,337	9,663	33	0.0	10,843	-10,843	112
55AV0	124	2.	13,000	17,945	-4,945	31	8,300	18,562	-10,262	113
61AA0	125	3.	2,000	16,311	-14,311	289	8,000	18,594	-10,594	114
61AE0	126	13.	5,000	9,288	-4,288	39	0.0	10,636	-10,636	115
62AA0	127	2.	6,000	13,478	-7,478	184	2,000	12,658	-10,658	116
719A0	201	3.	9,100	3,476	5,624	54	3,000	14,038	-11,038	117
748C0	202	4.	2,000	1,553	1,247	99	0,600	14,736	-12,136	118
748E0	203	5.	6,500	11,231	-4,731	25	2,000	14,272	-12,272	119
748G0	204	8.	2,000	0,988	1,928	81	0.0	12,716	-12,716	120
748H0	205	8.	2,100	30,922	3,022	116	4,000	16,848	-12,848	121
65B40	206	1.	13,300	9,488	3,812	19	10,000	22,952	-12,952	122
73JC0	207	29.	9,000	-7,366	16,366	3	16,000	29,216	-13,216	123
73JF0	209	23.	0,0	-5,151	5,151	125	2,000	16,311	-14,311	124
71CA0	209	2.	8,000	18,594	-10,594	111	9,000	23,676	-14,676	125
71640	210	7.	1,000	10,612	-8,712	28	8,000	27,692	-19,692	126
65AA0	211	1.	0,000	8,398	-7,398	44	10,000	43,722	-33,722	127


G&M MODEL RUN8P DEP VAR 11 NRTS
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID


BAM MODEL RUN80 DEP VAR 11 HRTS
RESIDUAL VS. FITTED Y
-15,753
27,866
71,485
POSITIVE
RESIDUALS
0
NEGATIVE
-15,753
27,866
71,488
FITTED Y

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN80 DEP VAR IS LSRA MIN Y = 4.2630 00 MAX Y = 1.1340 01 RANGE Y = 7.0750 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPOS" MODEL
LSRA = B(0) + B(1)FIGSEN + B(2)FIGCOM + B(3)BOMNAV + B(4)BOMSEN
+ B(5)CARNAV + B(6)DI + B(7)DUP + B(8)DVO + B(9)DNT
+ B(10)DCC + B(11)DEM + B(12)OPS + B(13)LUP + B(14)LCC
LSRA = LN(SRA)
SRA = STANDARD DEPOT REPAIR COST

IND,VAR(I)	NAME	COEF,B(I)	S.E. COEF.	T-VALUE	B(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL,INF,X(I)
0		-1.724850-01							
1	FIGSEN	-8.384890-01	1.340-01	4.7	0.3233	0.0	1.0000 00	1.0000 00	0.09
2	FIGCOM	-9.726880-01	2.110-01	2.7	0.3789	0.0	1.0000 00	1.0000 00	0.08
3	BOMNAV	-2.722730-01	1.480-01	1.9	0.2088	0.0	1.0000 00	1.0000 00	0.04
4	BOMSEN	4.569350-01	2.680-01	1.8	0.1185	0.0	1.0000 00	1.0000 00	0.06
5	CARNAV	-2.341560-01	1.340-01	1.7	0.2221	0.0	1.0000 00	1.0000 00	0.03
6	DI	4.364110-03	1.490-03	2.9	0.3268	0.0	1.0000 02	1.0000 02	0.06
7	DUP	-1.519810-11	2.950-12	5.1	0.2854	4.4840 05	1.3500 11	1.3500 11	0.29
8	DVO	5.734840-08	1.520-08	4.4	0.4487	1.8220 04	2.4220 07	2.4210 07	0.23
9	DNT	-2.826790-04	3.320-05	8.5	0.4226	6.8540 08	1.1680 04	1.1590 04	0.46
10	DCC	9.815510-08	1.580-08	6.2	0.3549	1.6980 02	3.1810 07	3.1810 07	0.43
11	DEM	3.114410-04	9.270-05	3.4	0.0482	3.2380 01	3.2520 03	3.2520 03	0.14
12	OPS	5.498760-04	1.380-04	4.2	0.2235	1.8440 02	2.8280 03	2.7240 03	0.21
13	LUP	5.723680-01	3.730-02	15.3	0.4542	5.8380 00	1.3250 01	8.2170 00	6.03
14	LCC	7.134950-02	4.350-02	1.6	0.0842	2.4850 00	9.0240 00	6.5390 00	0.07

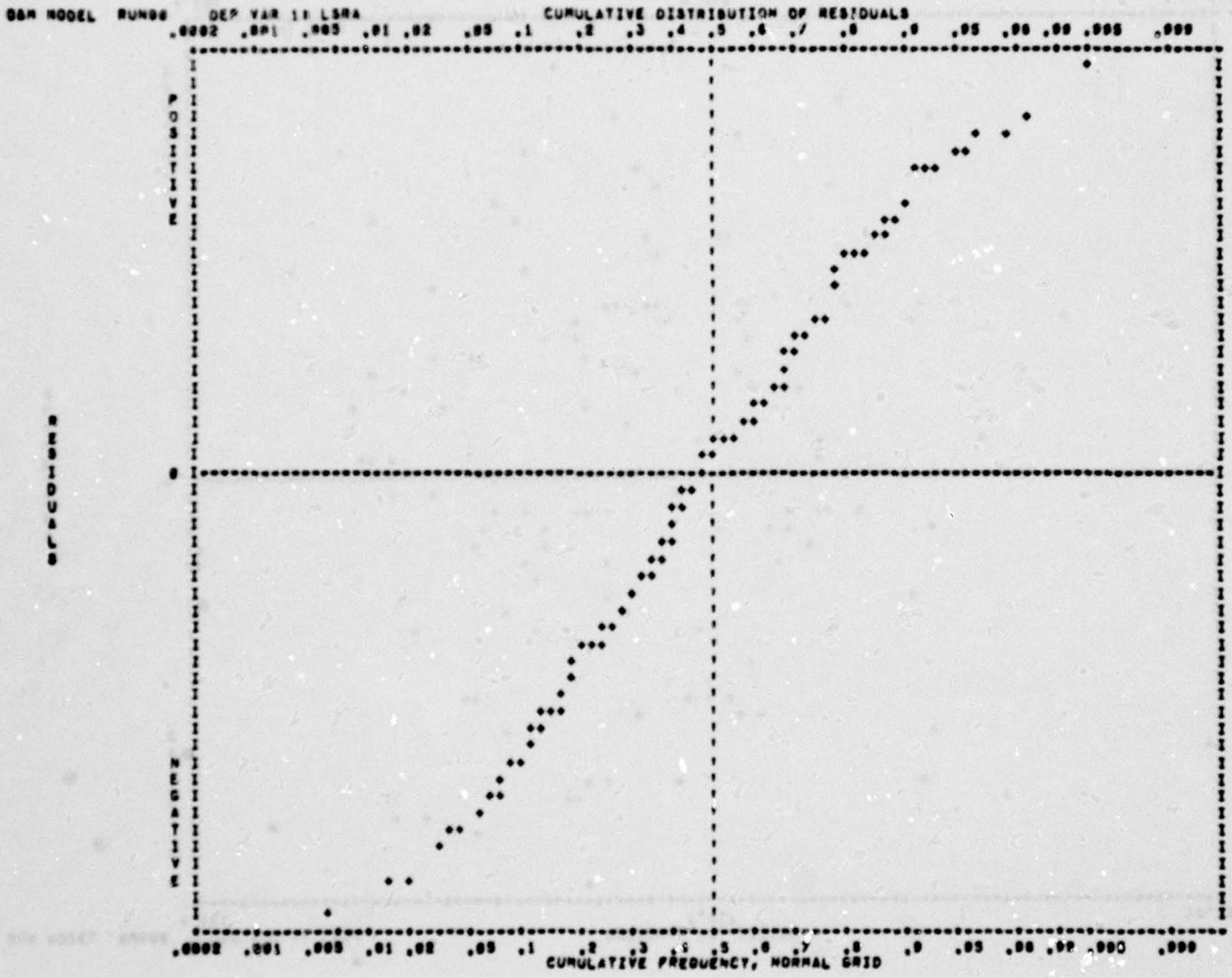
NO. OF OBSERVATIONS	119
NO. OF IND. VARIABLES	14
RESIDUAL DEGREES OF FREEDOM	104
F-VALUE	49.8
RESIDUAL ROOT MEAN SQUARE	0.48263133
RESIDUAL MEAN SQUARE	0.23293388
RESIDUAL SUM OF SQUARES	24.22583213
TOTAL SUM OF SQUARES	176.75716587
MULT. CORREL. COEF. SQUARED	.8629

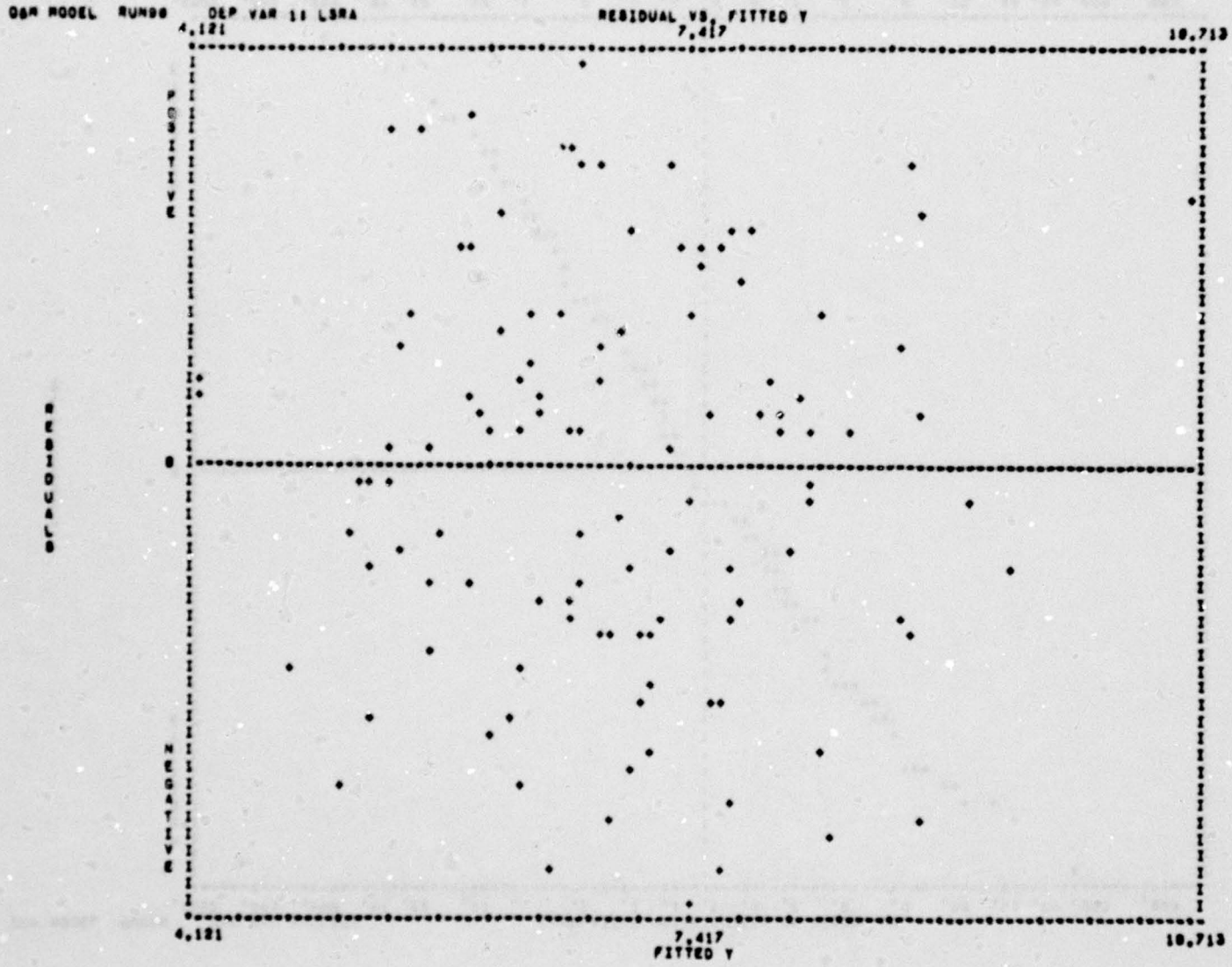
IND,VAR(I)	NAME	COEF,B(I)	MIN X(I)	MAX X(I)	RANGE X(I)	REL,INF,X(I)
*** COEFFICIENTS FROM PREVIOUS FIT ***						
0		-2.279740-01				
1	FIGSEN	-8.775550-01	0.0	1.0000 00	1.0000 00	0.10
2	FIGCOM	-8.498110-01	0.0	1.0000 00	1.0000 00	0.09
3	BOMNAV	-2.643190-01	0.0	1.0000 00	1.0000 00	0.04
4	BOMSEN	3.759710-01	0.0	1.0000 00	1.0000 00	0.05
5	CARNAV	-2.768940-01	0.0	1.0000 00	1.0000 00	0.04
6	DI	3.792780-03	0.0	1.0000 02	1.0000 02	0.05
7	DUP	-1.612790-11	4.4840 05	1.3500 11	1.3500 11	0.31
8	DVO	6.598840-08	1.8220 04	2.4220 07	2.4210 07	0.23
9	DNT	-2.773770-04	6.8540 08	1.1680 04	1.1590 04	0.45
10	DCC	9.328450-08	1.6980 02	3.1810 07	3.1810 07	0.41
11	DEM	3.683610-04	3.2380 01	3.2520 03	3.2520 03	0.17
12	OPS	5.197160-04	1.8440 02	2.8280 03	2.7240 03	0.20
13	LUP	5.594480-01	5.8380 00	1.3250 01	8.2170 00	0.05
14	LCC	1.847630-01	2.4850 00	9.0240 00	6.5390 00	0.10

RESIDUAL ROOT MEAN SQUARE	0.48757938
RESIDUAL MEAN SQUARE	0.23773357
RESIDUAL SUM OF SQUARES	24.72429142
TOTAL SUM OF SQUARES	176.75716587
MULT. CORREL. COEF. SQUARED	.8599

ORDERED BY COMPUTER INPUT						ORDERED BY RESIDUALS			
IDENT,	OBSV,	MSB DISTANCE	OBS, Y	FITTED Y	RESIDUAL	OBSV,	OBS, Y	FITTED Y	ORDERED RESID,	SEQ
71L80	2	1,	8,345	7,885	-0,539	18	7,681	6,794	0,887	1
71H80	3	3,	8,157	7,734	0,423	34	6,833	6,004	0,829	2
71P80	4	1,	5,628	7,143	-2,515	79	6,248	5,442	0,798	3
71P80	5	4,	8,153	8,007	0,146	116	6,477	5,682	0,795	4
7171J	6	11,	5,252	5,289	-0,037	135	7,434	6,666	0,768	5
72460	7	6,	5,541	5,768	-0,259	11	7,313	6,570	0,743	6
71FA0	8	1,	6,928	7,679	-0,772	56	7,478	6,748	0,731	7
71P80	10	2,	7,681	6,714	0,967	205	7,553	6,824	0,729	8
71CA0	11	2,	7,313	6,570	0,743	53	8,086	7,383	0,703	9
710A0	12	3,	8,176	7,975	0,201	28	9,585	8,886	0,698	10
51EA0	13	1,	7,368	7,320	0,048	25	11,338	10,713	0,625	11
52A80	15	3,	8,189	8,052	0,137	146	9,517	8,923	0,594	12
63900	16	5,	8,209	8,078	0,131	208	8,786	8,205	0,581	13
74JA0	18	11,	8,938	7,986	0,932	125	8,251	7,686	0,564	14
74JC0	19	2,	7,856	7,347	0,508	54	7,419	7,062	0,357	15
52GA1	20	1,	6,189	6,918	-0,809	95	8,390	7,855	0,536	16
71Z40	21	1,	8,477	7,158	-0,683	85	8,007	7,474	0,533	17
71Z80	22	6,	6,477	5,958	0,519	22	6,477	5,958	0,519	18
71ZC0	23	14,	4,382	5,118	-0,736	19	7,856	7,347	0,508	19
73EG0	24	7,	8,448	8,858	-0,408	114	8,155	7,648	0,507	20
73EP0	25	16,	11,338	10,713	0,625	93	6,436	5,940	0,496	21
73HA0	25	28,	9,087	8,958	0,128	110	6,436	5,940	0,496	22
73HC0	27	12,	8,121	8,287	-0,985	197	7,961	7,493	0,468	23
73NA0	28	7,	9,585	8,886	0,698	3	8,157	7,734	0,423	24
73090	29	10,	8,292	8,126	0,166	77	8,639	8,266	0,373	25
73BC0	30	7,	9,114	8,825	0,289	112	5,961	5,596	0,365	26
73K80	31	1,	7,383	6,984	0,328	57	7,812	7,462	0,350	27
73KF0	33	1,	7,136	6,857	0,278	283	6,939	6,588	0,349	28
73KK0	34	4,	8,833	8,004	0,829	198	6,745	6,403	0,343	29
75930	35	5,	5,333	5,522	-0,189	64	6,548	6,211	0,329	30
74BF0	37	3,	6,793	7,099	-0,306	65	6,548	6,211	0,329	31
74810	38	4,	8,605	8,448	0,157	31	7,383	6,984	0,328	32
78A10	39	4,	5,787	5,502	0,285	38	9,114	8,805	0,289	33
74FA0	42	41,	5,352	5,544	-0,192	39	5,787	5,502	0,285	34
74FH0	43	5,	7,338	7,697	-0,358	33	7,136	6,857	0,278	35
74FU0	44	14,	8,592	8,514	0,079	284	6,687	6,362	0,244	36
858H0	47	5,	5,455	5,484	-0,029	61	7,090	6,871	0,219	37
74FC0	48	10,	7,601	8,254	-0,653	12	8,176	7,975	0,201	38
74FK0	50	5,	5,273	5,697	-0,424	72	6,589	6,304	0,285	39
74FQ0	51	51,	9,210	9,276	-0,066	74	4,369	4,185	0,185	40
74MC0	53	4,	8,086	7,383	0,703	29	8,292	8,126	0,166	41
74CA0	54	3,	7,819	7,262	0,557	38	6,605	6,448	0,157	42
74CC0	56	3,	7,474	6,740	0,731	5	6,153	6,007	0,146	43
74FA1	57	5,	7,812	7,462	0,350	75	4,263	4,121	0,142	44
74E80	58	4,	7,819	7,817	0,002	15	8,189	8,052	0,137	45
73PH0	59	4,	7,090	7,625	-0,535	18	8,938	7,986	0,132	46
73P80	60	37,	7,340	7,436	-0,056	16	6,209	6,078	0,131	47
73P0R	61	17,	7,090	6,871	0,219	25	9,087	8,958	0,128	48
73PH0	63	5,	7,148	7,324	-0,176	84	7,654	7,545	0,110	49
71HA0	64	3,	6,548	6,211	0,329	76	6,544	6,436	0,108	50
710U0	65	3,	6,548	6,211	0,329	199	6,484	6,382	0,101	51
63AA0	66	2,	6,399	6,688	-0,281	206	6,818	6,725	0,096	52
63AG0	68	2,	8,133	8,459	-0,325	119	8,178	8,099	0,079	53
63NF0	70	7,	5,343	5,354	-0,058	44	8,592	8,514	0,079	54
71A8E	71	8,	5,959	5,219	-0,159	249	8,070	7,993	0,077	55
71ADA	72	4,	6,509	6,314	0,195	91	6,741	6,666	0,075	56
73D8A	73	2,	6,927	7,258	-0,332	92	6,741	6,666	0,075	57
714CC	74	26,	4,369	4,185	0,185	89	8,274	8,200	0,074	58
73C80	75	26,	4,263	4,121	0,142	210	5,882	5,743	0,059	59
73CEN	76	8,	6,544	6,436	0,108	13	7,368	7,320	0,048	60
73CFK	77	7,	8,639	8,266	0,373	108	5,529	5,484	0,045	61

730AM	78	4.	5.485	6.113	-0.628	102	6.170	6.154	0.016	62
73EBA	79	8.	6.240	5.442	0.798	58	7.919	7.917	0.002	63
73EBF	80	4.	5.788	5.962	-0.261	47	5.455	5.484	-0.029	64
71CA0	81	5.	5.624	5.775	-0.151	6	5.252	5.289	-0.037	65
73EG0	82	9.	6.485	6.833	-0.348	83	6.170	6.218	-0.048	66
73HC0	83	11.	6.170	6.218	-0.048	78	5.303	5.354	-0.050	67
73LA0	84	3.	7.654	7.545	0.110	60	7.380	7.436	-0.056	68
77EC0	85	2.	8.947	7.474	0.533	51	9.219	9.276	-0.056	69
770CA	87	3.	7.872	8.283	-0.211	27	8.121	8.287	-0.065	70
78AEA	89	5.	8.274	8.288	0.974	101	6.981	7.089	-0.108	71
73KA0	90	2.	6.782	7.179	-0.396	71	5.069	5.219	-0.150	72
639AA	91	3.	6.741	6.666	0.075	81	5.624	5.775	-0.151	73
63CAA	92	3.	6.741	6.660	0.075	119	6.547	6.705	-0.158	74
699AA	93	3.	6.436	5.940	0.496	63	7.148	7.324	-0.176	75
81BBA	94	2.	5.429	6.934	-0.505	35	5.333	5.522	-0.189	76
61AA0	95	2.	6.399	7.855	0.536	42	5.352	5.544	-0.192	77
61AC0	97	1.	6.339	7.824	-0.686	87	7.872	8.083	-0.211	78
72AC0	99	2.	6.781	7.819	-0.238	123	7.498	7.715	-0.225	79
71CA0	100	4.	6.745	6.483	0.343	103	9.286	9.519	-0.233	80
72EAA	101	3.	6.981	7.288	-0.108	99	6.781	7.019	-0.238	81
72EC0	102	6.	6.170	6.154	0.016	111	5.081	5.328	-0.246	82
728P0	103	17.	9.286	9.519	-0.233	7	5.501	5.760	-0.259	83
71JA0	104	1.	5.587	6.318	-0.731	88	5.728	5.982	-0.261	84
71LA0	105	4.	7.401	7.730	-0.329	66	6.399	6.660	-0.261	85
720N0	106	9.	9.517	8.923	0.594	68	6.133	6.459	-0.325	86
72AC0	107	1.	7.951	7.493	0.458	105	7.401	7.730	-0.329	87
71716	108	7.	5.529	5.484	0.045	122	6.337	6.666	-0.329	88
71317	109	4.	6.494	6.392	0.101	93	6.927	7.258	-0.332	89
725F0	110	8.	6.178	6.799	0.079	82	8.485	8.833	-0.348	90
72980	111	5.	5.881	5.628	-0.248	126	6.312	6.674	-0.363	91
71JCE	112	4.	5.961	5.596	0.365	43	7.339	7.697	-0.358	92
72AE0	113	9.	8.145	8.953	-0.808	37	6.783	7.799	-0.396	93
72CC0	114	8.	8.155	7.648	0.507	98	6.782	7.179	-0.396	94
71ZAP	115	1.	6.477	6.884	-0.407	115	6.477	6.884	-0.407	95
71ZB0	116	8.	6.477	5.882	0.795	94	6.428	6.834	-0.406	96
71ZD0	117	14.	4.382	4.842	-0.460	24	8.448	8.856	-0.408	97
699AA	118	3.	5.436	5.940	0.496	58	5.273	5.697	-0.424	98
63AF0	119	3.	6.547	6.705	-0.158	117	4.382	4.842	-0.460	99
63AA0	120	1.	6.378	7.406	-1.028	292	5.844	6.324	-0.480	100
63121	121	3.	7.434	6.666	0.768	4	6.628	7.143	-0.515	101
63AA4	122	2.	6.337	6.666	-0.329	59	7.390	7.925	-0.535	102
55AL0	123	6.	7.490	7.715	-0.225	2	6.545	7.085	-0.539	103
55AV0	124	11.	7.490	8.368	-0.878	291	6.976	7.542	-0.566	104
61AA0	125	2.	8.251	7.686	0.564	127	5.694	6.263	-0.570	105
61AE0	126	2.	6.312	6.674	-0.363	128	4.787	5.367	-0.580	106
62AA0	127	2.	5.694	6.263	-0.570	78	5.485	6.113	-0.628	107
64211	129	10.	4.787	5.367	-0.580	46	7.691	8.254	-0.563	108
719A0	281	3.	6.976	7.542	-0.566	21	6.477	7.160	-0.683	109
749C0	282	3.	5.844	6.324	-0.480	97	6.339	7.024	-0.686	110
749E0	283	5.	6.929	6.580	0.349	104	5.587	6.318	-0.731	111
749G0	284	4.	6.667	6.362	0.244	23	4.382	5.118	-0.736	112
749H0	285	5.	7.553	6.824	0.729	9	6.998	7.679	-0.772	113
699A0	286	3.	6.810	6.725	0.085	113	8.145	8.953	-0.808	114
73JC0	287	3.	6.706	7.630	0.924	28	6.109	6.918	-0.809	115
73JF0	288	5.	6.788	6.285	0.501	124	7.498	8.368	-0.870	116
71CA0	289	5.	6.870	7.093	0.877	287	6.706	7.630	-0.924	117
719A0	210	12.	5.802	5.743	0.059	211	5.587	6.516	-0.929	118
69AA0	811	4.	6.587	6.516	-0.929	120	6.378	7.406	-1.028	119


O&M MODEL RUN96 DEP VAR 11 LSRA
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID


OSR MODEL RUN88 DEP VAR IS LSRA
RESIDUAL VS. FITTED Y
4.121
7.417
10.713
POSITIVE
0
NEGATIVE
RESIDUALS
4.121
7.417
10.713
FITTED Y

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN110 DEP VAR IS LMHTOT MIN Y = -7.8980 00 MAX Y = -5.4590-01 RANGE Y = 6.8440 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPOS" MODEL

LMHTOT = B(0) + B(1)FIGSEN + B(2)FIGCOM + B(3)SOMNAV + B(4)SOMCOM
+ B(5)CO + B(6)SS + B(7)MCC + B(8)MDI + B(9)MEM
+ B(10)DUP + B(11)OCC + B(12)DDI + B(13)DEM + B(14)OPS
+ B(15)OPD + B(16)DUF + B(17)MRTS + B(18)LUP
+ B(19)LVO + B(20)LMT

LMHTOT = LN(MMHTOT)
MMHTOT = TOTAL MAINTENANCE MANHOURS PER OPERATING HOUR

IND,VAR(I)	NAME	COEF,B(I)	S.E. COEF.	T-VALUE	B(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL.INF.X(I)
0		-8.917780 00							
1	FIGSEN	-1.884180-01	1.960-01	1.0	0.3386	0.0	1.0000 00	1.0000 00	0.03
2	FIGCOM	5.192410-01	1.790-01	3.1	0.0827	0.0	1.0000 00	1.0000 00	0.00
3	SOMNAV	5.492280-01	1.290-01	4.3	0.2589	0.0	1.0000 00	1.0000 00	0.00
4	SOMCOM	6.254910-01	1.540-01	3.9	0.1674	0.0	1.0000 00	1.0000 00	0.10
5	CO	2.226140-01	5.220-02	4.3	0.6457	4.9230-03	6.6740 00	6.6690 00	0.23
6	SS	-1.579750-02	1.920-03	8.2	0.8698	0.0	1.0000 02	1.0000 02	0.24
7	MCC	8.243980-05	5.260-05	1.5	0.7498	-1.1680 03	7.1220 03	8.2900 03	0.10
8	MDI	-1.223110-02	1.480-03	8.7	0.5947	-2.4980 01	7.5120 01	1.0100 02	0.19
9	MEM	-2.182120-02	2.320-03	9.4	0.5957	-1.9280 01	8.9890 01	1.0880 02	0.33
10	DUP	5.434250-12	2.540-12	1.4	0.1857	3.6910 05	1.4360 11	1.4360 11	0.58
11	OCC	-4.177730-08	1.230-08	3.4	0.3727	7.2990 02	2.8560 07	2.8560 07	0.18
12	DDI	1.251540-04	6.780-05	1.8	0.2674	1.6880-01	3.8910 03	3.8910 03	0.06
13	DEM	-1.587250-04	7.210-05	2.2	0.1998	2.7840 01	3.8470 03	3.8220 03	0.07
14	OPS	-2.432940-04	1.090-04	2.2	0.2919	9.4280 01	2.8830 03	2.7880 03	0.10
15	OPD	1.686790-07	9.940-08	1.7	0.2161	7.2990 02	4.1890 06	4.1880 06	0.10
16	DUF	2.838580-01	1.310-01	2.2	0.1128	2.8250-01	2.1830 00	1.9840 00	0.00
17	MRTS	-4.538280-03	2.060-03	2.2	0.3817	0.0	1.0000 02	1.0000 02	0.07
18	LUP	9.329610-01	4.160-02	12.8	0.7847	0.0360 00	1.3250 01	8.2170 00	0.07
19	LVO	1.683990-01	1.020-01	1.7	0.0823	3.4810 00	9.0180 00	5.0110 00	0.14
20	LMT	3.368160-01	1.030-01	3.3	0.0828	0.0	8.1970 00	8.1970 00	0.07

NO. OF OBSERVATIONS	130
NO. OF IND. VARIABLES	20
RESIDUAL DEGREES OF FREEDOM	109
F-VALUE	83.7
RESIDUAL ROOT MEAN SQUARE	0.41877720
RESIDUAL MEAN SQUARE	0.17537434
RESIDUAL SUM OF SQUARES	19.11588350
TOTAL SUM OF SQUARES	249.59287129
MULT. CORREL. COEF. SQUARED	.9234

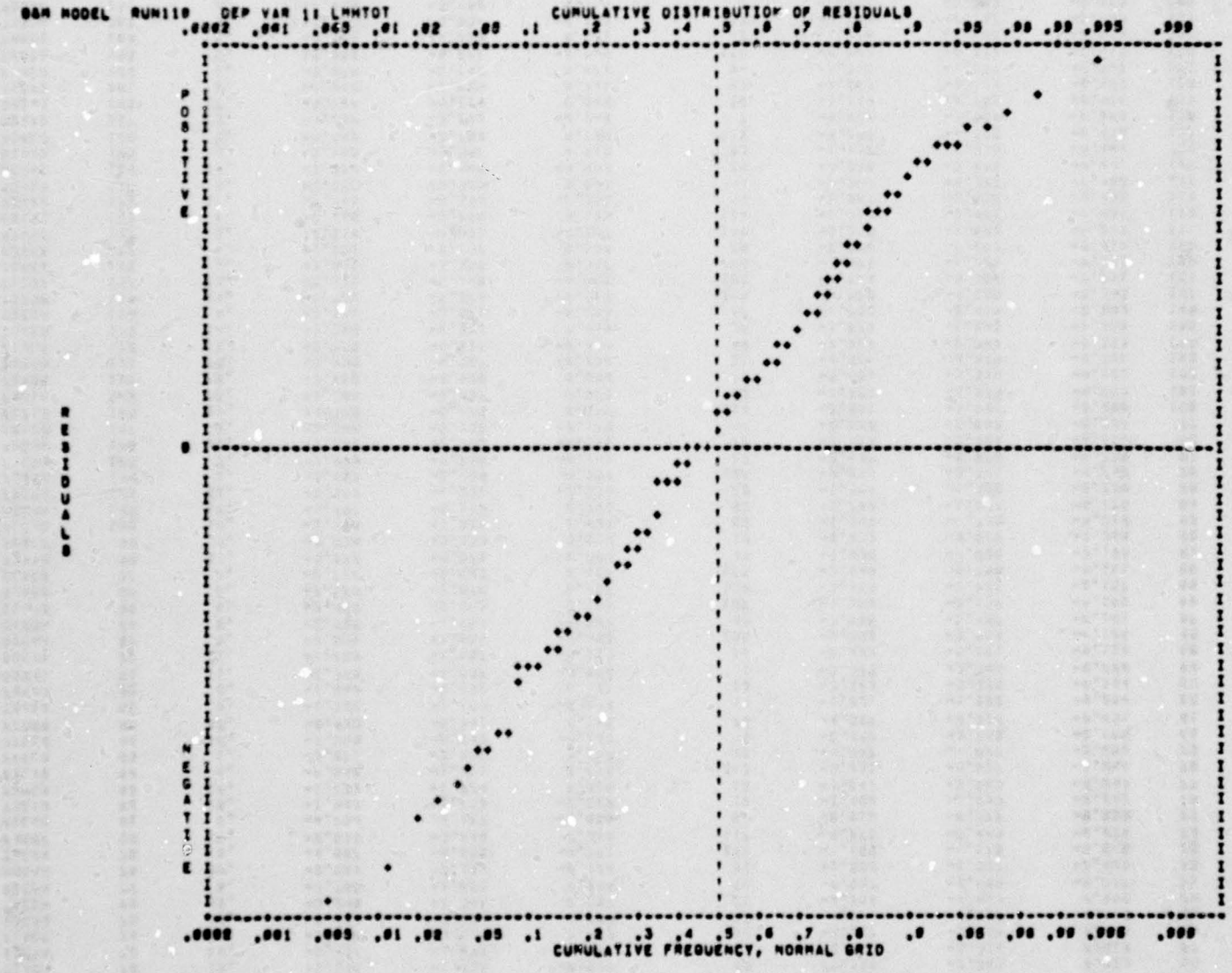
IND,VAR(I)	NAME	COEF,B(I)	MIN X(I)	MAX X(I)	RANGE X(I)	REL.INF.X(I)
*** COEFFICIENTS FROM PREVIOUS FIT ***						
0		-8.419880 00				
1	FIGSEN	-2.833230-01	0.0	1.0000 00	1.0000 00	0.03
2	FIGCOM	5.452950-01	0.0	1.0000 00	1.0000 00	0.00
3	SOMNAV	6.199730-01	0.0	1.0000 00	1.0000 00	0.00
4	SOMCOM	6.712330-01	0.0	1.0000 00	1.0000 00	0.10
5	CO	2.199190-01	4.9230-03	6.6740 00	6.6690 00	0.22
6	SS	-1.621820-02	0.0	1.0000 02	1.0000 02	0.25
7	MCC	7.836210-05	-1.1680 03	7.1220 03	8.2900 03	0.19
8	MDI	-1.227740-02	-2.4980 01	7.5120 01	1.0100 02	0.19
9	MEM	-2.213810-02	-1.9280 01	8.9880 01	1.0880 02	0.34
10	DUP	6.534460-12	3.6910 05	1.4360 11	1.4360 11	0.14
11	OCC	-3.599280-08	7.2990 02	2.8560 07	2.8560 07	0.18
12	DDI	1.284950-04	1.6880-01	3.8910 03	3.8910 03	0.05
13	DEM	-1.685950-04	2.7840 01	3.8470 03	3.7280 03	0.08
14	OPS	-2.123270-04	9.4280 01	2.8830 03	2.7880 03	0.09
15	OPD	1.782740-07	7.2990 02	4.1890 06	4.1880 06	0.11
16	DUF	3.316740-01	2.8250-01	2.1830 00	1.9840 00	0.10
17	MRTS	-3.988480-03	0.0	1.0000 02	1.0000 02	0.06
18	LUP	5.695820-01	0.0360 00	1.3250 01	8.2170 00	0.72
19	LVO	1.791880-01	3.4810 00	9.0180 00	5.0110 00	0.15
20	LMT	3.138870-01	0.0	8.1970 00	8.1970 00	0.05

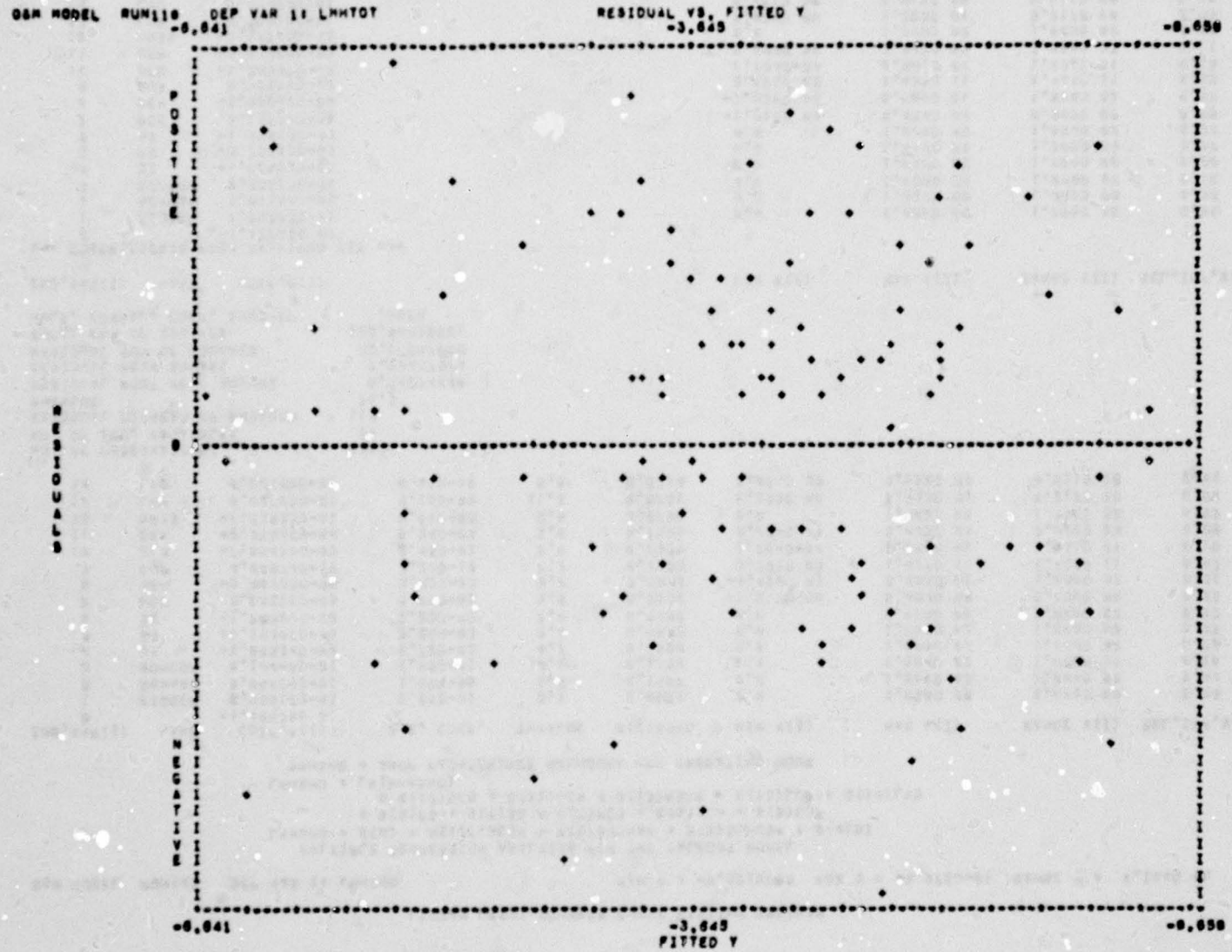
RESIDUAL ROOT MEAN SQUARE	0.42536683
RESIDUAL MEAN SQUARE	0.18093628
RESIDUAL SUM OF SQUARES	19.72209213
TOTAL SUM OF SQUARES	249.59287129
MULT. CORREL. COEF. SQUARED	.9209

IDENT,	OBSV,	MAH DISTANCE	OBS, Y	FITTED Y	RESIDUAL
71920	1	1.	-3.385	-3.384	-0.000
71L80	2	6.	-2.971	-2.380	-0.663
71M60	3	20.	-2.855	-3.147	0.293
71PK0	4	2.	-3.009	-3.120	0.111
71P90	5	8.	-3.637	-3.582	-0.055
71710	6	17.	-5.841	-5.923	0.082
724G0	7	12.	-6.023	-5.559	-0.465
71FA0	8	3.	-3.875	-4.012	0.137
71F8A	10	13.	-3.992	-3.949	-0.042
71CA0	11	4.	-5.328	-4.434	-0.887
71DA0	12	3.	-3.344	-2.866	-0.478
91EA0	13	5.	-3.282	-3.989	0.708
92AA0	14	6.	-3.314	-3.902	0.588
92AB0	15	9.	-3.322	-3.739	0.417
63900	16	9.	-5.497	-5.371	-0.126
714E0	17	19.	-1.425	-2.032	0.607
74JA0	18	5.	-2.432	-2.222	-0.210
74JC0	19	8.	-3.649	-3.605	-0.044
52GA1	20	4.	-3.718	-4.239	0.520
71ZA0	21	5.	-4.388	-4.068	-0.320
73EG0	24	11.	-2.218	-2.437	0.221
73EP0	25	22.	-1.878	-1.618	0.540
73HA0	26	22.	-0.793	-0.873	0.081
73HC0	27	13.	-1.879	-1.541	-0.338
73NA0	28	26.	-2.382	-2.498	0.108
73090	29	11.	-2.137	-1.878	-0.259
739C0	30	12.	-3.217	-3.230	0.013
73K80	31	2.	-2.399	-2.921	0.522
73KE0	32	3.	-3.494	-2.517	-0.978
73KF0	33	3.	-3.988	-3.836	-0.064
73KK0	34	10.	-2.728	-2.894	0.174
73930	35	7.	-4.783	-5.107	0.324
74900	36	4.	-2.739	-3.004	0.265
748F0	37	3.	-3.001	-3.137	0.136
748K0	38	34.	-5.473	-5.567	0.094
78A10	39	6.	-4.426	-4.238	-0.190
78GA0	40	9.	-3.618	-3.457	-0.161
74FF0	41	27.	-2.760	-2.327	-0.433
74FA0	42	17.	-1.775	-1.143	-0.632
74FH0	43	5.	-2.553	-2.712	0.159
74FU0	45	48.	-1.947	-2.615	0.668
73CG0	46	36.	-4.897	-4.947	-0.050
74FC0	48	13.	-2.925	-2.157	0.232
74FJ0	49	3.	-2.929	-2.596	-0.333
74FK0	50	8.	-5.499	-5.195	0.597
74FQ0	51	27.	-2.819	-2.165	0.146
74KA0	52	7.	-2.981	-2.379	0.297
74KC0	53	7.	-3.184	-3.406	0.382
74CA0	54	5.	-4.385	-3.568	-0.775
74C90	55	7.	-4.330	-3.888	-0.442
74CCP	56	7.	-4.556	-4.557	0.000
74FA1	57	9.	-2.859	-2.597	-0.262
74E80	58	8.	-3.145	-3.363	0.218
73PH0	59	4.	-3.257	-2.837	-0.420
73P80	60	36.	-0.657	-0.650	-0.007
73PD0	61	18.	-0.910	-0.877	-0.033
73PF0	62	23.	-2.593	-2.184	-0.409
73PH0	63	5.	-2.889	-2.788	0.099
71NA0	64	4.	-1.943	-2.388	0.445
71QU0	65	4.	-2.368	-2.389	0.021
63AA0	66	3.	-2.416	-2.444	0.027
65AA0	67	4.	-2.752	-2.410	-0.342
63AG0	68	4.	-3.792	-3.943	0.151
638F0	70	14.	-5.631	-5.329	-0.302

OBSV,	OBS, Y	FITTED Y	ORDERED RESID,	SEQ
210	-4.585	-5.422	0.857	1
13	-3.292	-3.960	0.668	2
201	-2.289	-3.030	0.741	3
63	-2.289	-2.788	0.699	4
50	-5.499	-6.195	0.697	5
44	-1.947	-2.615	0.668	6
84	-2.548	-1.211	0.665	7
126	-5.528	-6.164	0.644	8
209	-2.818	-3.252	0.634	9
17	-1.425	-2.032	0.607	10
14	-3.314	-3.902	0.588	11
108	-4.585	-5.175	0.578	12
119	-1.581	-2.147	0.566	13
25	-1.878	-1.618	0.540	14
204	-3.592	-4.133	0.531	15
20	-3.718	-4.234	0.529	16
31	-2.399	-2.921	0.522	17
96	-2.178	-2.676	0.497	18
202	-3.275	-3.749	0.474	19
64	-1.943	-2.388	0.445	20
198	-1.498	-1.938	0.438	21
74	-4.187	-4.616	0.429	22
15	-3.322	-3.739	0.417	23
66	-2.553	-3.249	0.395	24
101	-1.787	-2.179	0.393	25
118	-2.911	-3.298	0.386	26
211	-3.252	-3.638	0.384	27
194	-3.907	-3.454	0.357	28
83	-1.132	-1.470	0.338	29
55	-4.783	-5.107	0.324	30
53	-3.184	-3.486	0.302	31
77	-2.785	-1.883	0.298	32
52	-2.881	-2.378	0.297	33
3	-2.855	-3.147	0.293	34
189	-1.785	-2.057	0.273	35
38	-2.739	-3.004	0.265	36
6	-5.661	-5.923	0.262	37
48	-1.925	-2.157	0.232	38
24	-2.218	-2.437	0.221	39
125	-3.088	-3.307	0.219	40
58	-3.145	-3.363	0.218	41
206	-2.958	-3.182	0.214	42
99	-3.338	-3.552	0.214	43
95	-2.428	-2.613	0.193	44
98	-1.948	-2.131	0.191	45
28	-2.382	-2.498	0.188	46
34	-2.728	-2.894	0.174	47
85	-3.071	-3.239	0.168	48
43	-2.553	-2.712	0.159	49
68	-3.792	-3.943	0.151	50
91	-2.819	-2.165	0.146	51
126	-3.648	-3.788	0.140	52
9	-3.875	-4.012	0.137	53
37	-3.001	-3.137	0.136	54
97	-2.717	-2.833	0.116	55
88	-6.526	-6.641	0.115	56
4	-3.009	-3.120	0.111	57
121	-2.116	-2.219	0.103	58
110	-3.722	-3.828	0.096	59
123	-3.217	-3.315	0.098	60
78	-5.245	-5.342	0.097	61
38	-5.473	-5.567	0.094	62
98	-5.777	-5.871	0.093	63
26	-0.793	-0.873	0.081	64

714BE	71	13.	-4.498	-4.494	0.006	66	-2.416	-2.444	0.027	65
71ADA	72	16.	-1.556	-1.328	-0.230	65	-2.366	-2.389	0.021	66
73D8A	73	18.	-1.737	-1.298	-0.440	113	-2.293	-2.311	0.019	67
71ACC	74	49.	-4.187	-4.618	0.429	38	-3.217	-3.238	0.013	68
73C8Q	75	52.	-5.613	-5.354	-0.259	56	-4.554	-4.557	0.008	69
73CEN	76	35.	-5.245	-5.342	0.097	71	-4.488	-4.494	0.006	70
73CPK	77	6.	-0.785	-1.083	0.298	68	-0.857	-0.858	-0.007	71
73DAM	78	28.	-2.564	-2.189	-0.374	91	-1.565	-1.557	-0.008	72
73EBA	79	13.	-4.687	-4.626	-0.061	287	-1.185	-1.175	-0.010	73
73E8F	80	10.	-2.833	-3.049	0.395	117	-0.471	-0.448	-0.020	74
71CA8	81	0.	-4.754	-4.117	-0.638	61	-0.910	-0.877	-0.033	75
73EG8	82	15.	-1.949	-1.738	-0.219	18	-3.992	-3.949	-0.042	76
73MC8	83	14.	-1.132	-1.478	0.338	19	-3.649	-3.605	-0.044	77
73L48	84	0.	-0.948	-1.211	0.665	283	-5.255	-5.207	-0.049	78
77EC8	85	1.	-3.971	-3.239	0.158	46	-4.897	-4.847	-0.050	79
77EE8	86	46.	-7.998	-6.342	-0.748	5	-3.637	-3.582	-0.055	80
77D86	88	46.	-6.526	-6.441	0.115	79	-4.687	-4.628	-0.061	81
76AEA	89	0.	-1.251	-1.168	-0.084	69	-1.231	-1.168	-0.064	82
73KA8	90	6.	-1.948	-2.131	0.191	33	-3.988	-3.838	-0.064	83
839AA	91	11.	-1.565	-1.557	-0.008	1	-3.385	-3.384	-0.088	84
83CAA	92	11.	-1.782	-1.557	-0.225	18	-5.497	-5.371	-0.126	85
859AA	93	0.	-2.952	-2.669	-0.283	285	-3.793	-3.664	-0.128	86
8188A	94	5.	-2.598	-1.999	-0.597	48	-3.618	-3.457	-0.161	87
81AA8	95	6.	-2.428	-2.613	0.193	187	-3.328	-3.138	-0.182	88
81A88	96	6.	-2.179	-2.078	-0.097	128	-3.118	-2.951	-0.167	89
81AC8	97	7.	-2.717	-2.833	0.116	185	-2.948	-2.756	-0.191	90
72AA8	98	27.	-5.777	-5.871	0.093	39	-4.425	-4.238	-0.196	91
72AC8	99	6.	-3.338	-3.552	0.214	16	-2.432	-2.222	-0.210	92
71CA8	100	14.	-1.498	-1.936	0.438	82	-1.949	-1.738	-0.219	93
72EAA	101	10.	-1.787	-2.179	0.393	92	-1.782	-1.557	-0.225	94
729P0	103	20.	-1.579	-1.221	-0.358	72	-1.556	-1.328	-0.238	95
71J48	104	2.	-3.997	-3.454	0.357	127	-4.939	-3.721	-0.249	96
71L48	105	9.	-2.949	-2.758	-0.191	29	-2.137	-1.878	-0.259	97
72D48	106	13.	-3.392	-2.993	-0.399	75	-5.613	-5.354	-0.259	98
72AC8	107	2.	-3.388	-3.138	-0.162	57	-2.859	-2.597	-0.262	99
71716	108	11.	-4.585	-5.078	0.570	114	-3.881	-3.521	-0.288	100
71310	109	15.	-1.765	-2.037	0.273	93	-2.952	-2.669	-0.283	101
72RF8	110	12.	-3.722	-3.828	0.098	78	-5.631	-5.329	-0.302	102
72R88	111	25.	-5.325	-4.597	-0.729	21	-4.368	-4.048	-0.320	103
71JCE	112	11.	-5.265	-4.815	-0.450	49	-2.929	-2.596	-0.333	104
72AE8	113	14.	-2.293	-2.311	0.019	27	-1.879	-1.541	-0.338	105
720C8	114	4.	-3.991	-3.521	-0.288	67	-2.752	-2.410	-0.342	106
71Z88	115	14.	-5.882	-5.384	-0.617	288	-4.588	-4.155	-0.345	107
71Z08	117	23.	-6.471	-6.446	-0.026	122	-3.744	-3.394	-0.351	108
859AA	118	4.	-2.911	-3.298	0.386	183	-1.579	-1.221	-0.358	109
83AF8	119	8.	-1.681	-2.147	0.548	78	-2.564	-2.189	-0.374	110
83AA8	120	2.	-3.118	-2.951	-0.167	106	-3.392	-2.993	-0.399	111
83121	121	0.	-2.116	-2.219	0.103	124	-3.074	-2.665	-0.408	112
83AAA	122	11.	-3.744	-3.394	-0.351	59	-3.257	-2.837	-0.420	113
85AL8	123	6.	-3.217	-3.315	0.098	41	-2.760	-2.327	-0.433	114
85AV8	124	13.	-3.074	-2.665	-0.408	55	-4.338	-3.888	-0.442	115
81AA8	125	3.	-3.888	-3.387	0.219	73	-1.737	-1.288	-0.448	116
81AE8	126	5.	-3.840	-3.788	0.148	112	-5.265	-4.815	-0.452	117
82AA8	127	5.	-4.039	-3.791	-0.249	7	-5.823	-5.359	-0.465	118
84211	128	17.	-5.528	-6.184	0.644	12	-3.344	-2.868	-0.478	119
71BA8	201	2.	-2.289	-3.030	0.741	62	-2.683	-2.184	-0.499	120
748C8	202	1.	-3.275	-3.749	0.474	94	-2.596	-1.999	-0.597	121
748E8	203	5.	-5.255	-5.287	-0.049	116	-6.882	-5.384	-0.817	122
748G8	204	2.	-3.582	-4.033	0.531	42	-1.775	-1.143	-0.632	123
748H8	205	3.	-3.793	-3.664	-0.128	81	-4.784	-4.117	-0.638	124
858A8	206	4.	-2.968	-3.182	0.214	2	-2.971	-2.309	-0.663	125
73JC8	207	0.	-1.185	-1.175	-0.010	111	-5.325	-4.597	-0.729	126
73JF8	208	0.	-4.500	-4.155	-0.345	88	-7.090	-6.342	-0.748	127
71CA8	209	7.	-2.818	-3.252	0.434	94	-4.335	-3.560	-0.775	128
716A8	210	17.	-4.965	-5.422	0.457	11	-5.320	-4.434	-0.887	129
89AA8	211	0.	-3.252	-3.636	0.384	32	-3.494	-2.317	-0.978	130


B&M MODEL RUN119 DEP VAR 11 LMHTOT
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID


G&M MODEL RUN118 DEP VAR IS LMHTOT
RESIDUAL VS. FITTED Y
-8.641
-3.645
-0.650
POSITIVE
RESIDUALS
0
NEGATIVE
-8.641
-3.645
-0.650
FITTED Y

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

B&N MODEL RUN128 DEP VAR 11 LMMSHO MIN Y = -9.6910 00 MAX Y = -8.2720-01 RANGE Y = 8.8640 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPOS" MODEL
LMMSHO = B(0) + B(1)FIGCOM + B(2)BOMNAV + B(3)BOMCOM + B(4)DI
+ B(5)PS + B(6)SS + B(7)MCO + B(8)MEM + B(9)DUP
+ B(10)DCO + B(11)DEM + B(12)MRTS + B(13)LUP + B(14)LVO
LMMSHO = LN(MMMSHO)
MMMSHO = SHOP MAINTENANCE MANHOURS PER OPERATING HOUR

IND,VAR(I)	NAME	COEF,B(I)	S.E. COEF.	T-VALUE	R(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL,INF,X(I)
0		-1.126260 01							
1	FIGCOM	6.953190-01	2.210-01	3.1	0.0922	0.0	1.0000 00	1.0000 00	0.00
2	BOMNAV	3.882290-01	1.590-01	1.9	0.1687	0.0	1.0000 00	1.0000 00	0.04
3	BOMCOM	8.144960-01	1.990-01	4.1	0.1158	0.0	1.0000 00	1.0000 00	0.10
4	DI	-1.665340-02	1.720-03	9.7	0.4528	0.0	1.0000 02	1.0000 02	0.28
5	PS	-6.163890-03	2.580-03	2.4	0.0842	0.0	1.0000 02	1.0000 02	0.07
6	SS	-1.785240-02	2.330-03	7.7	0.6449	0.0	1.0000 02	1.0000 02	0.22
7	MCO	3.232210-01	5.980-02	6.5	0.3532	-1.2150 00	5.4540 00	6.6690 00	0.26
8	MEM	-2.967350-02	3.090-03	9.7	0.4858	-1.0280 01	8.9880 01	1.0000 02	0.36
9	DUP	4.899740-12	3.280-12	1.3	0.1433	3.6910 05	1.4360 11	1.4360 11	0.07
10	DCO	-7.854820-02	2.450-02	2.9	0.2829	1.7840-04	1.8610 01	1.8610 01	0.16
11	DEM	-2.356250-04	9.240-05	2.6	0.1886	2.7840 01	3.8470 03	3.8280 03	0.09
12	MRTS	-7.235350-03	2.610-03	2.8	0.2788	0.0	1.0000 02	1.0000 02	0.09
13	LUP	6.827230-01	5.120-02	11.8	0.6731	5.0380 00	1.3250 01	8.2170 00	0.66
14	LVO	6.825580-01	6.310-02	9.8	0.5744	3.4810 00	9.0120 00	5.6110 00	0.41

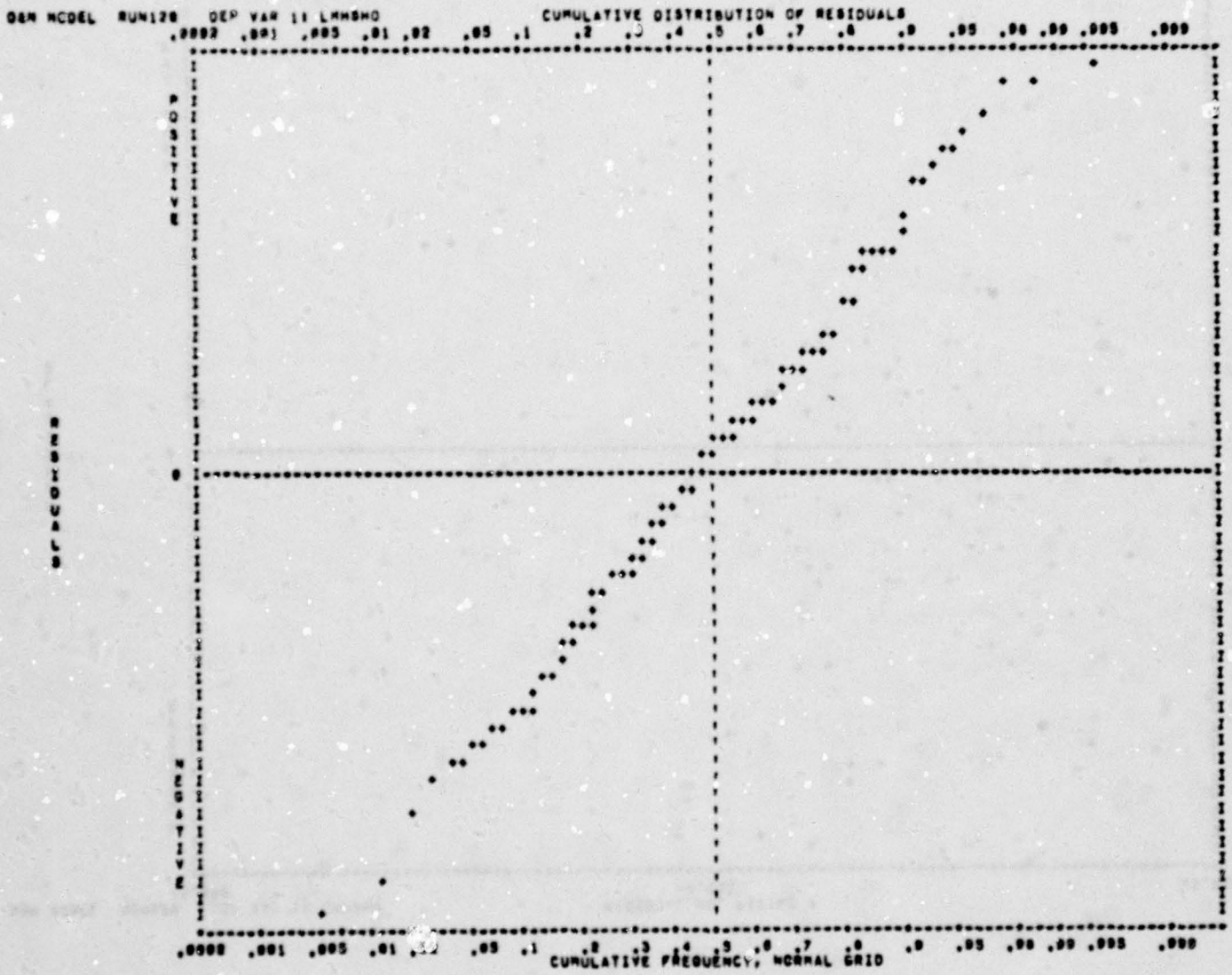
NO. OF OBSERVATIONS	130
NO. OF IND. VARIABLES	14
RESIDUAL DEGREES OF FREEDOM	115
F-VALUE	71.8
RESIDUAL ROOT MEAN SQUARE	0.54274648
RESIDUAL MEAN SQUARE	0.29457374
RESIDUAL SUM OF SQUARES	33.87597980
TOTAL SUM OF SQUARES	329.94538861
MULT. CORREL. COEF. SQUARED	.8973

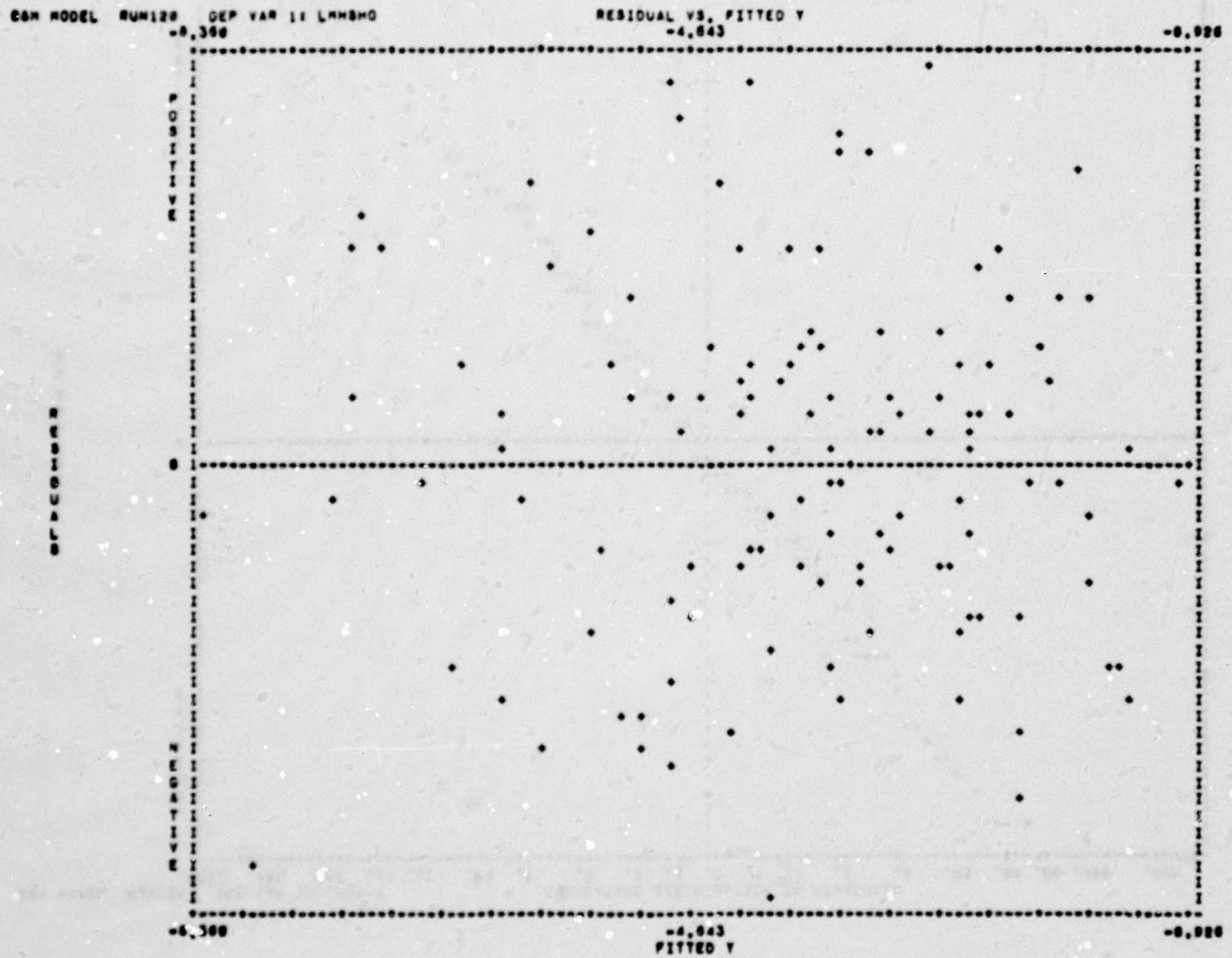
IND,VAR(I)	NAME	COEF,B(I)	MIN X(I)	MAX X(I)	RANGE X(I)	REL,INF,X(I)
*** COEFFICIENTS FROM PREVIOUS FIT ***						
0		-1.129330 01				
1	FIGCOM	7.697730-01	0.0	1.0000 00	1.0000 00	0.09
2	BOMNAV	3.891690-01	0.0	1.0000 00	1.0000 00	0.05
3	BOMCOM	8.432150-01	0.0	1.0000 00	1.0000 00	0.10
4	DI	-1.678640-02	0.0	1.0000 02	1.0000 02	0.28
5	PS	-5.897730-03	0.0	1.0000 02	1.0000 02	0.07
6	SS	-1.856130-02	0.0	1.0000 02	1.0000 02	0.23
7	MCO	3.136260-01	-1.2150 00	5.4540 00	6.6690 00	0.25
8	MEM	-3.032620-02	-1.0280 01	8.9880 01	1.0000 02	0.37
9	DUP	6.921740-12	3.6910 05	1.4360 11	1.4360 11	0.12
10	DCO	-5.783970-02	1.7840-04	1.8610 01	1.8610 01	0.13
11	DEM	-2.938890-04	2.7840 01	3.8470 03	3.8280 03	0.11
12	MRTS	-6.567230-03	0.0	1.0000 02	1.0000 02	0.08
13	LUP	6.526160-01	5.0380 00	1.3250 01	8.2170 00	0.65
14	LVO	5.552680-01	3.4810 00	9.0120 00	5.6110 00	0.38

RESIDUAL ROOT MEAN SQUARE	0.54968553
RESIDUAL MEAN SQUARE	0.30216518
RESIDUAL SUM OF SQUARES	34.74899535
TOTAL SUM OF SQUARES	329.94538861
MULT. CORREL. COEF. SQUARED	.8946

ORDERED BY COMPUTER INPUT						ORDERED BY RESIDUALS				
IDENT,	OBSV,	WSS DISTANCE	OBS, Y	FITTED Y	RESIDUAL	OBSV,	OBS, Y	FITTED Y	ORDERED RESID,	SEQ
71B2@	1	1,	-4,829	-3,688	-@,341	17	-1,574	-2,*14	1,248	1
71L8@	2	5,	-3,357	-2,660	-@,697	209	-3,839	-4,215	1,175	2
71M6@	3	20,	-3,357	-3,569	@,212	13	-3,572	-4,741	1,178	3
7[P8@	4	2,	-3,54[	-3,618	@,@76	14	-3,628	-4,667	1,039	4
71P8@	5	5,	-3,979	-4,037	@,@58	96	-2,487	-3,483	@,996	5
71710	6	10,	-6,246	-6,893	@,647	44	-2,286	-3,271	@,985	6
724G@	7	9,	-6,598	-5,758	-@,839	221	-2,557	-3,547	@,960	7
71F4@	8	5,	-4,193	-4,489	@,376	84	-@,827	-1,748	@,921	8
71F8@	10	14,	-4,549	-4,673	@,123	15	-3,572	-4,434	@,862	9
71CA@	11	4,	-5,817	-4,958	-@,859	218	-4,988	-5,828	@,848	10
71DA@	12	3,	-3,581	-3,352	-@,329	50	-@,262	-7,034	@,772	11
91EA@	13	5,	-3,572	-4,741	1,178	74	-4,646	-5,334	@,688	12
92AA@	14	6,	-3,628	-4,467	1,039	118	-3,217	-3,902	@,685	13
92A9@	15	8,	-3,572	-4,434	@,862	89	-1,619	-2,299	@,679	14
63BD@	16	19,	-6,884	-5,918	-@,894	211	-3,6@8	-4,272	@,672	15
71AE@	17	16,	-1,574	-2,814	1,248	6	-6,246	-5,893	@,647	16
74JA@	18	9,	-2,724	-2,538	-@,193	34	-3,944	-[,691	@,647	17
74JC@	19	7,	-3,981	-4,224	@,243	128	-6,521	-7,159	@,638	18
52GA1	20	2,	-4,837	-5,043	@,208	119	-1,852	-2,473	@,621	19
7[ZA@	21	5,	-5,709	-4,961	-@,748	188	-5,834	-5,624	@,589	20
73EG@	24	18,	-3,139	-3,250	@,111	46	-4,514	-5,@32	@,518	21
73EP@	25	19,	-1,484	-1,996	@,503	188	-1,743	-2,260	@,516	22
73HA@	26	18,	-1,825	-@,998	-@,826	61	-1,173	-1,678	@,505	23
73HC@	27	18,	-2,613	-2,147	-@,466	25	-1,484	-1,996	@,503	24
73N4@	28	25,	-2,821	-3,210	@,389	99	-2,363	-2,769	@,406	25
73@8@	29	8,	-2,488	-2,524	@,@36	194	-3,322	-3,714	@,391	26
735C@	30	11,	-4,135	-3,817	-@,318	28	-2,821	-3,210	@,389	27
73K8@	31	3,	-2,889	-3,067	@,178	9	-4,193	-4,488	@,378	28
73KE@	32	4,	-3,884	-3,315	-@,469	53	-3,461	-3,825	@,365	29
73KF@	33	2,	-4,531	-4,234	-@,296	58	-3,453	-3,814	@,362	30
73KK@	34	18,	-3,844	-3,@91	@,647	88	-3,381	-3,654	@,353	31
7593@	35	8,	-5,468	-5,469	@,@@9	207	-1,682	-2,033	@,351	32
748D@	36	5,	-3,128	-3,242	@,122	57	-3,532	-3,864	@,332	33
748F@	37	2,	-3,573	-3,588	-@,@@5	98	-5,985	-6,299	@,314	34
74810	38	35,	-6,687	-6,635	-@,@52	71	-4,911	-5,271	@,310	35
78A1@	39	5,	-5,158	-4,358	-@,799	130	-2,@84	-2,378	@,294	36
78GA@	40	7,	-4,565	-4,787	@,232	84	-2,317	-2,609	@,293	37
74FF@	41	21,	-3,195	-2,209	-@,985	123	-3,933	-4,218	@,285	38
74FA@	42	15,	-2,185	-1,369	-@,716	99	-3,673	-3,955	@,282	39
74FH@	43	6,	-2,958	-3,179	@,221	72	-1,738	-1,983	@,253	40
74FU@	44	45,	-2,286	-3,271	@,985	19	-3,991	-4,224	@,243	41
73CG@	46	36,	-4,514	-5,@32	@,518	40	-4,565	-4,797	@,232	42
74F[@	48	18,	-2,163	-@,120	-@,043	83	-2,529	-2,748	@,231	43
74F_@	49	3,	-3,137	-2,626	-@,511	204	-3,@31	-4,162	@,231	44
74FK@	50	9,	-6,262	-7,@34	@,772	117	-6,927	-7,156	@,230	45
74F9@	51	18,	-2,417	-2,537	@,120	110	-4,311	-4,539	@,228	46
74KA@	52	7,	-2,319	-2,498	@,180	43	-2,958	-3,179	@,221	47
74KC@	53	7,	-3,461	-3,825	@,365	3	-3,357	-3,569	@,212	48
74CA@	54	5,	-5,345	-4,@30	-1,315	22	-4,837	-4,@43	@,208	49
74CR@	55	7,	-5,102	-4,661	-@,442	52	-2,318	-2,498	@,180	50
74CC@	56	7,	-5,432	-4,@@@	-@,632	125	-3,522	-3,702	@,180	51
74FA1	57	9,	-3,532	-3,864	@,332	31	-2,889	-3,067	@,178	52
74ER@	58	6,	-3,453	-3,814	@,360	78	-5,@@5	-6,@54	@,168	53
73PH@	59	4,	-3,@46	-3,384	-@,282	68	-4,@99	-4,265	@,166	54
73P8@	60	29,	-6,930	-6,@26	-@,@03	101	-2,1@1	-2,258	@,157	55
73PD@	61	13,	-1,173	-1,678	@,505	121	-2,491	-2,549	@,148	56
73PF@	62	28,	-2,948	-2,5@5	-@,435	18	-4,549	-4,673	@,123	57
73PH@	63	4,	-2,589	-2,749	@,231	35	-3,128	-3,242	@,122	58
71NA@	64	4,	-2,317	-2,5@9	@,293	51	-2,417	-2,537	@,120	59
71QU@	65	4,	-2,716	-2,612	-@,104	24	-3,139	-3,250	@,111	60
83A4@	66	3,	-2,788	-2,618	-@,@@@	206	-3,232	-3,338	@,@99	61
65AA@	67	4,	-2,955	-2,523	-@,432	93	-2,732	-2,827	@,@@5	62
63AG@	68	4,	-4,@99	-4,265	@,166	4	-3,542	-3,618	@,@76	63
638F@	70	15,	-5,@88	-6,@54	@,168	5	-3,@72	-4,@37	@,@58	64




G&M MODEL RUN128 DEP VAR IS LMMSHO
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID


C&H MODEL RUN128 DEP VAR IS LMMSMG
RESIDUAL VS. FITTED Y
-8.366
-4.643
-0.926
POSITIVE
0
NEGATIVE
RESIDUALS
-8.366
-4.643
-0.926
FITTED Y

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

O&M MODEL RUN138 DEP VAR IS LLSCFD MIN Y = -4.5290 P5 MAX Y = 8.3420 00 RANGE Y = 8.8710 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPOS" MODEL

LLSCFD = B(0) + B(1)FIGCOM + B(2)BOMNAV + B(3)BOMCOM + B(4)CD
+ B(5)DI + B(6)EM + B(7)XT + B(8)SS + B(9)DCC + B(10)DPS
+ B(11)DPD + B(12)DUP + B(13)NRTS + B(14)LUP + B(15)LMT
+ B(16)LPO

LLSCFD = LN(LSCFLD)

LSCFLD = FIELD LOGISTICS SUPPORT COST PER OPERATING HOUR

IND.VAR(I)	NAME	COEF.B(I)	S.E. COEF.	T-VALUE	R(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL.INF.X(I)
0		-5.629180 00							
1	FIGCOM	5.588920-01	1.970-01	2.8	0.1872	0.0	1.0000 00	1.0000 00	0.06
2	BOMNAV	7.768980-01	1.520-01	5.1	0.1988	0.0	1.0000 00	1.0000 00	0.11
3	BOMCOM	6.929950-01	2.020-01	3.4	0.1443	0.0	1.0000 00	1.0000 00	0.10
4	CD	2.312610-01	4.380-02	5.3	0.2858	4.9230-03	6.6740 00	6.6690 00	0.22
5	DI	-1.143580-02	1.720-03	6.6	0.4885	0.0	1.0000 02	1.0000 02	0.17
6	EM	-1.958310-02	3.870-03	6.3	0.5721	0.0	1.0000 02	1.0000 02	0.28
7	XT	-6.594120-03	3.160-03	2.1	0.4413	0.0	1.0000 02	1.0000 02	0.10
8	SS	-1.112880-02	2.180-03	5.1	0.6347	0.0	1.0000 02	1.0000 02	0.16
9	DCC	-2.446930-06	1.310-08	1.9	0.1419	1.0000 01	2.8230 07	2.8230 07	0.10
10	DPS	-3.376630-04	1.120-04	3.0	0.1556	3.8190 01	2.9720 03	2.9340 03	0.14
11	DPD	1.899680-07	1.310-07	1.4	0.3093	4.4190 02	4.8840 06	4.8840 06	0.11
12	DUP	6.251730-01	1.840-01	3.8	0.1844	1.7640-01	2.8160 00	1.0400 00	0.17
13	NRTS	-8.645850-03	2.430-03	3.6	0.2928	0.0	1.0000 02	1.0000 02	0.13
14	LUP	4.732820-01	4.880-02	9.7	0.6792	5.0360 00	1.3250 01	8.2170 00	0.57
15	LMT	5.388330-01	7.910-02	6.8	0.7381	0.0	5.1570 00	5.1570 00	0.40
16	LPO	1.943630-01	5.880-02	2.1	0.0383	1.0000 00	0.0000 00	0.0000 00	0.10

NO. OF OBSERVATIONS	127
NO. OF IND. VARIABLES	16
RESIDUAL DEGREES OF FREEDOM	110
F-VALUE	54.8
RESIDUAL ROOT MEAN SQUARE	0.51852114
RESIDUAL MEAN SQUARE	0.26863183
RESIDUAL SUM OF SQUARES	29.68958154
TOTAL SUM OF SQUARES	257.35638814
MULT. CORREL. COEF. SQUARED	.8846

IND.VAR(I)	NAME	COEF.B(I)	MIN X(I)	MAX X(I)	RANGE X(I)	REL.INF.X(I)
*** COEFFICIENTS FROM PREVIOUS FIT ***						
0		-5.921240 P0				
1	FIGCOM	6.984110-01	0.0	1.0000 00	1.0000 00	0.10
2	BOMNAV	8.443730-01	0.0	1.0000 00	1.0000 00	0.12
3	BOMCOM	7.346230-01	0.0	1.0000 00	1.0000 00	0.11
4	CD	2.213460-01	4.9230-03	6.6740 00	6.6690 00	0.21
5	DI	-1.155770-02	0.0	1.0000 02	1.0000 02	0.17
6	EM	-1.985420-02	0.0	1.0000 02	1.0000 02	0.29
7	XT	-7.383850-03	0.0	1.0000 02	1.0000 02	0.11
8	SS	-1.881250-02	0.0	1.0000 02	1.0000 02	0.16
9	DCC	-2.276360-06	1.0000 01	2.8230 07	2.8230 07	0.09
10	DPS	-3.189740-04	3.8190 01	2.9720 03	2.9340 03	0.13
11	DPD	2.153360-07	4.4190 02	4.8840 06	4.8840 06	0.13
12	DUP	0.479590-01	1.7640-01	2.8160 00	1.0400 00	0.17
13	NRTS	-8.224180-03	0.0	1.0000 02	1.0000 02	0.12
14	LUP	4.776590-01	5.0360 00	1.3250 01	8.2170 00	0.57
15	LMT	5.226630-01	0.0	5.1570 00	5.1570 00	0.38
16	LPO	1.483780-01	1.0000 00	0.0000 00	0.0000 00	0.14

RESIDUAL ROOT MEAN SQUARE	0.51317730
RESIDUAL MEAN SQUARE	0.26335894
RESIDUAL SUM OF SQUARES	29.28868391
TOTAL SUM OF SQUARES	257.35638814
MULT. CORREL. COEF. SQUARED	.8873

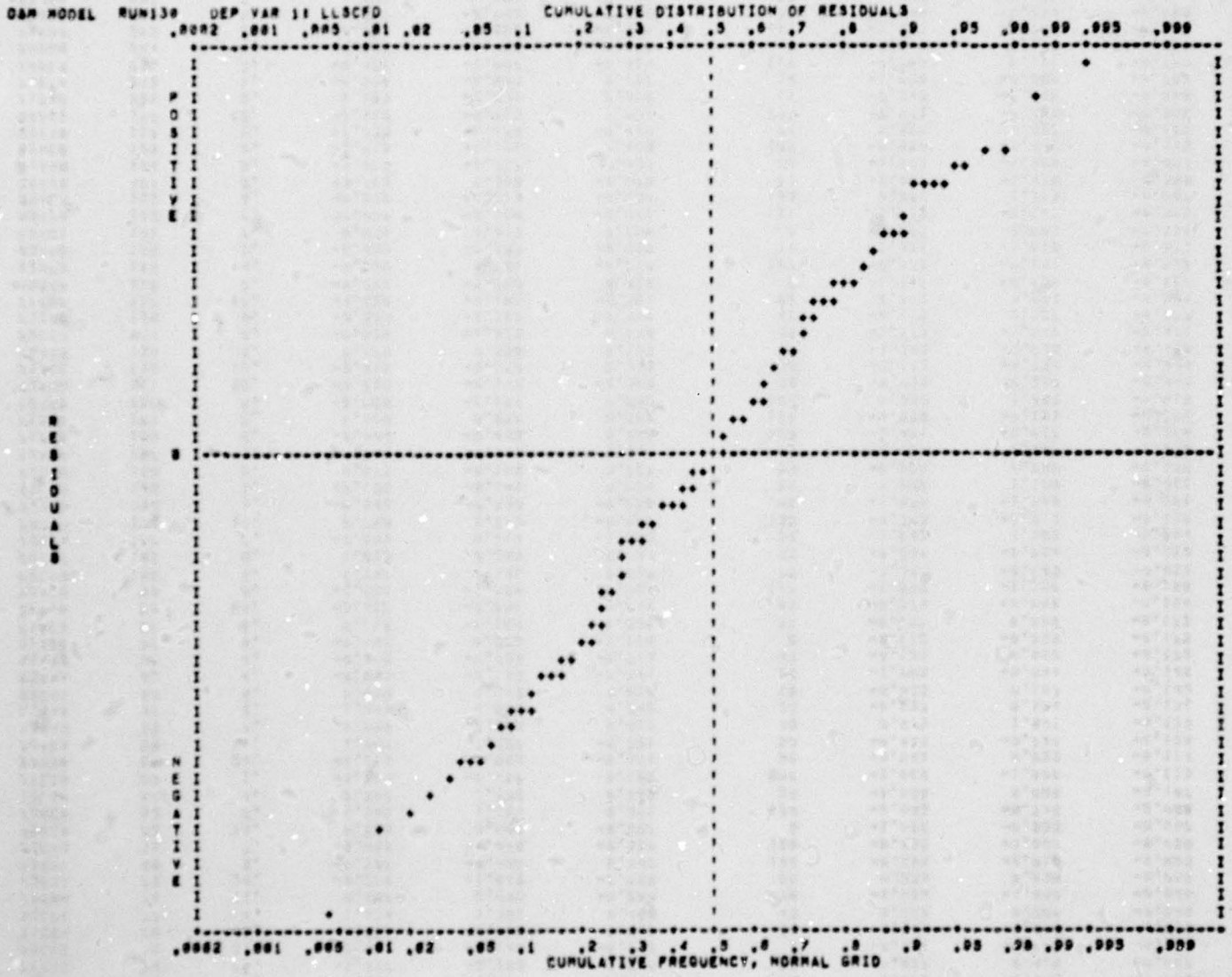
ORDERED BY COMPUTER INPUT

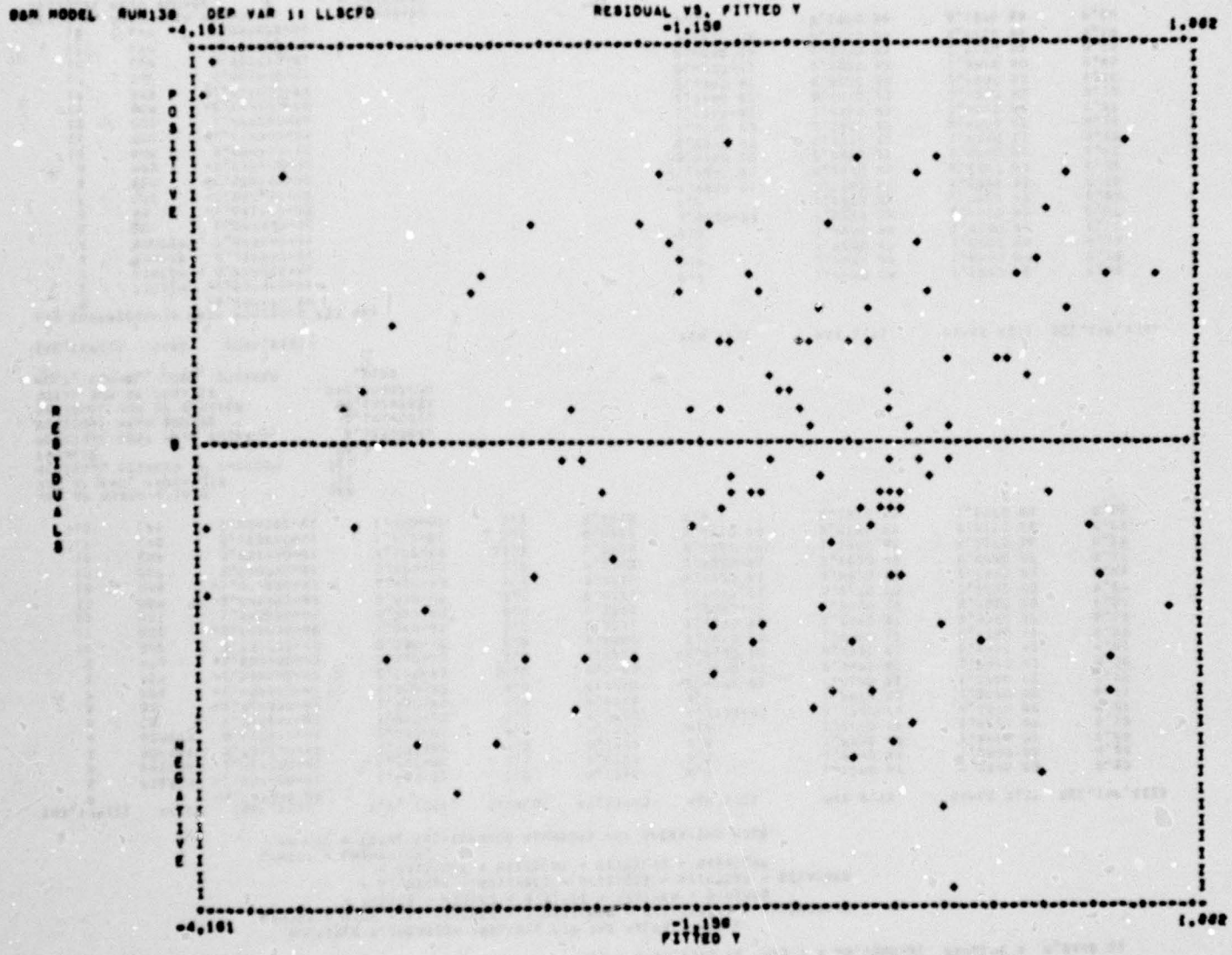
IDENT.	OBSV.	PSB DISTANCE	OBS. Y	FITTED Y	RESIDUAL
71B2B	1	8.	-0.711	-0.678	-0.033
71L9B	2	3.	-0.273	-0.098	-0.175
71PKB	4	1.	-0.469	-0.664	0.195
71P8B	5	3.	-1.022	-0.925	-0.097
71712	6	10.	-2.969	-3.115	0.145
724GB	7	11.	-3.535	-2.981	-0.554
71G5B	8	2.	-0.793	0.093	-0.795
71FAB	9	2.	-1.307	-0.780	-0.527
71CAB	11	3.	-2.545	-1.845	-0.700
71DAB	12	2.	-1.096	-0.392	-0.703
51EAB	13	3.	-0.758	-1.185	0.427
52AAB	14	4.	-0.596	-1.327	0.731
52AB9	15	5.	-0.897	-1.278	0.582
76JA9	18	3.	-0.835	0.107	-0.142
74JC9	19	4.	-1.092	-0.944	-0.148
52GA1	20	6.	-0.384	-1.014	0.630
71ZA9	21	4.	-1.847	-1.808	-0.039
71Z8P	22	8.	-3.506	-2.583	-0.923
71ZC9	23	15.	-3.121	-4.110	0.989
73EG9	24	7.	-0.827	0.104	-0.131
73EP9	25	12.	1.479	1.825	0.645
73HA9	26	13.	2.147	1.658	0.487
73HC9	27	7.	1.592	1.268	-0.224
53HA8	28	14.	-0.868	0.039	-0.107
73DB9	29	6.	1.721	0.965	0.538
73K9B	31	1.	0.306	-0.321	0.627
73KEB	32	2.	-0.812	-0.367	-0.446
73KF8	33	2.	-1.203	-0.736	-0.466
73KK8	34	5.	0.943	-0.347	0.390
75938	35	5.	-3.149	-2.334	-0.815
74BDP	36	3.	-0.178	-0.488	0.310
74BF8	37	5.	-0.429	-0.601	0.172
F4B18	38	18.	-2.575	-2.916	0.341
78A18	39	3.	-1.949	-1.779	0.830
F8GA8	40	9.	-0.121	0.050	-0.172
74FF8	41	14.	-0.120	0.357	-0.477
74FA8	42	14.	0.912	1.041	-0.129
74FMP	43	3.	0.220	0.268	-0.048
74FU8	44	25.	0.701	0.445	0.256
73CG9	46	19.	-1.878	-1.589	-0.281
74FC9	48	8.	0.935	0.707	0.228
74FJ8	49	2.	0.243	-0.038	0.282
74FK8	50	7.	-2.821	-3.567	0.746
74FW8	51	18.	1.318	0.842	0.476
74KAP	52	4.	0.518	0.434	0.078
74KC9	53	4.	-0.848	-0.729	-0.120
74CH9	55	5.	-1.535	-1.892	0.833
74JCP	56	6.	-1.934	-1.889	-0.045
74FA1	57	8.	0.427	0.416	0.089
74EBP	58	4.	-0.398	-0.544	0.146
73PH8	59	2.	-0.298	0.040	-0.338
73PE8	60	17.	1.912	1.138	0.774
73P08	61	15.	1.867	1.862	0.008
73PF8	62	12.	0.999	0.624	0.525
73PM8	63	3.	-0.167	0.008	-0.175
71HA8	64	3.	0.714	0.302	0.412
71GU8	65	3.	0.230	0.299	-0.069
83AAY	66	2.	0.278	0.209	0.068
85A38	67	3.	-0.224	0.128	-0.352
83AG8	68	3.	-1.512	-1.040	-0.471
638C8	69	7.	-0.020	-0.881	0.861
638F8	70	13.	-3.172	-2.724	-0.449
7148E	71	9.	-1.782	-1.884	0.098

ORDERED BY RESIDUALS

OBSV.	OBS. Y	FITTED Y	ORDERED RESID.	SEQ
128	-2.910	-4.813	1.894	1
23	-3.121	-4.110	0.989	2
69	-0.020	-0.881	0.861	3
84	2.342	1.492	0.850	4
108	1.147	0.341	0.806	5
178	0.575	-0.182	0.777	6
89	1.912	1.138	0.774	7
58	-2.821	-3.567	0.746	8
101	1.013	0.268	0.744	9
14	-0.596	-1.327	0.731	10
25	1.670	0.825	0.845	11
204	-0.788	-1.425	0.637	12
29	-0.384	-1.014	0.630	13
31	0.306	-0.321	0.627	14
74	-1.527	-2.153	0.598	15
15	-0.697	-1.278	0.582	16
189	0.020	0.258	0.578	17
29	1.591	0.985	0.536	18
99	-0.686	-1.198	0.504	19
218	-1.990	-2.398	0.487	20
26	2.147	1.658	0.487	21
77	1.874	1.392	0.482	22
51	1.318	0.842	0.476	23
118	-0.328	-0.800	0.472	24
125	-0.270	-0.717	0.430	25
188	-2.004	-2.433	0.429	26
13	-0.758	-1.185	0.427	27
98	0.709	0.297	0.412	28
64	0.714	0.302	0.412	29
34	0.043	-0.347	0.390	30
83	1.545	1.164	0.381	31
201	0.329	-0.039	0.368	32
112	-2.619	-2.954	0.343	33
38	-2.575	-2.916	0.341	34
36	-0.178	-0.488	0.310	35
80	-0.127	-0.420	0.302	36
97	0.118	-0.180	0.298	37
202	-0.670	-0.966	0.297	38
211	-0.593	-0.888	0.295	39
49	0.243	-0.038	0.282	40
44	0.701	0.445	0.256	41
91	1.051	0.809	0.242	42
48	0.935	0.707	0.228	43
4	-0.459	-0.664	0.195	44
72	1.092	0.901	0.191	45
37	-0.429	-0.601	0.172	46
121	0.251	0.085	0.166	47
58	-0.398	-0.544	0.146	48
6	-2.986	-3.115	0.145	49
113	0.178	0.056	0.122	50
98	-3.117	-3.231	0.114	51
126	-1.018	-1.121	0.103	52
85	-0.385	-0.487	0.102	53
114	-0.828	-0.928	0.100	54
71	-1.782	-1.880	0.098	55
118	-1.056	-1.151	0.095	56
209	-0.345	-0.425	0.080	57
52	0.518	0.434	0.076	58
66	0.276	0.209	0.068	59
39	-1.049	-1.079	0.030	60
195	-0.175	-0.149	0.024	61
76	-2.732	-2.750	0.017	62
92	0.819	0.809	0.010	63

71A04	72	9.	1.892	0.991	0.191	61	1.887	1.862	0.996	64
73084	73	7.	0.696	1.357	-0.661	78	0.288	0.892	-0.995	65
71ACC	74	26.	-1.527	-2.193	0.598	57	0.487	0.416	-0.928	66
73CB0	75	31.	-3.397	-3.145	-0.212	1	-0.711	-0.678	-0.033	67
73CE4	76	22.	-2.732	-2.758	0.017	21	-1.847	-1.698	-0.038	68
73CF4	77	7.	1.874	1.392	0.482	43	0.228	0.268	-0.048	69
73DA4	78	11.	0.888	0.892	-0.005	56	-1.934	-1.889	-0.045	70
73E94	79	18.	-2.371	-1.819	-0.552	65	0.238	0.299	-0.059	71
73E8F	80	0.	-0.127	-0.429	0.302	122	-0.996	-0.910	-0.085	72
71CA0	81	7.	-2.885	-1.476	-0.598	128	-0.455	-0.367	-0.088	73
73EG0	82	10.	0.885	0.992	-0.107	5	-1.922	-0.825	-0.097	74
73HC0	83	0.	1.945	1.184	0.381	104	-0.843	-0.745	-0.098	75
73L40	84	4.	2.342	1.492	0.850	26	-0.968	0.839	-0.107	76
7?EC0	85	1.	-0.365	-0.467	0.102	208	-1.889	-1.696	-0.113	77
77D80	86	23.	-4.274	-4.288	-0.194	96	-0.892	0.822	-0.114	78
7?AE4	89	11.	1.887	1.329	-0.321	53	-0.848	-0.728	-0.120	79
73?A0	90	4.	0.789	0.297	0.412	42	0.912	1.041	-0.129	80
83B44	91	6.	1.851	0.889	0.242	24	-0.827	0.184	-0.131	81
83C44	92	6.	0.619	0.889	0.010	16	-0.835	0.187	-0.142	82
85B44	93	4.	-0.998	-0.149	-0.841	19	-1.992	-0.944	-0.148	83
81AA0	95	4.	-0.268	-0.854	-0.214	48	-0.121	0.059	-0.172	84
81AB0	96	4.	-0.992	0.922	-0.114	2	-0.273	-0.098	-0.175	85
81AC0	97	8.	0.118	-0.188	0.298	83	-0.187	0.988	-0.175	86
72A40	98	28.	-3.117	-3.231	0.114	88	-4.274	-4.080	-0.194	87
72AC0	99	6.	-0.686	-1.198	0.584	127	-1.355	-1.156	-0.198	88
71CA0	100	8.	1.147	0.341	0.806	75	-3.357	-3.145	-0.212	89
72EA4	101	6.	1.913	0.268	0.744	95	-0.288	-0.054	-0.214	90
72EC4	102	7.	-0.809	0.414	-1.223	27	1.942	1.266	-0.224	91
72BF0	103	11.	0.766	1.379	-0.587	123	-0.549	-0.312	-0.236	92
71JA0	104	1.	-0.843	-0.745	-0.098	46	-1.879	-1.589	-0.291	93
71LA0	105	3.	-0.125	-0.148	0.024	89	1.887	1.329	-0.321	94
72DA0	106	8.	0.675	-0.102	0.777	59	-0.298	0.048	-0.338	95
72AC0	107	1.	-0.708	-0.161	-0.547	87	-0.294	0.128	-0.352	96
71710	108	6.	-2.844	-2.433	0.429	203	-2.451	-2.087	-0.364	97
71310	109	7.	0.829	0.259	0.570	117	-4.529	-4.161	-0.369	98
72BF0	110	6.	-1.056	-1.151	0.095	207	1.332	1.750	-0.418	99
72A40	111	12.	-2.719	-2.149	-0.585	32	-0.912	-0.367	-0.446	100
71JCE	112	10.	-2.611	-2.094	0.343	79	-3.172	-2.724	-0.449	101
72AE0	113	0.	0.179	0.058	0.122	33	-1.283	-0.728	-0.555	102
72CC0	114	2.	-0.828	-0.928	0.100	66	-1.512	-1.040	-0.471	103
71Z90	116	9.	-3.583	-2.782	-0.800	41	-0.120	0.357	-0.477	104
71Z0F	117	15.	-4.529	-4.161	-0.369	62	0.899	0.624	-0.525	105
8804A	118	2.	-0.328	-0.800	0.472	9	-1.387	-0.789	-0.527	106
83AF0	119	4.	-0.560	0.101	-0.779	107	-0.788	-0.161	-0.547	107
83440	120	1.	-0.455	-0.387	-0.089	79	-2.371	-1.819	-0.552	108
83121	121	4.	0.251	0.085	0.166	7	-3.535	-2.981	-0.554	109
83444	122	7.	-0.998	-0.919	-0.085	111	-2.718	-2.145	-0.565	110
85AL0	123	4.	-0.548	-0.312	-0.236	103	0.788	1.375	-0.587	111
85AV0	124	8.	-0.812	0.360	-0.973	81	-2.858	-1.476	-0.598	112
81AA0	125	2.	-0.278	-0.717	0.438	55	-1.635	-1.002	-0.633	113
81AE0	126	4.	-1.918	-1.121	0.103	208	-0.697	-0.242	-0.845	114
82AA0	127	2.	-1.355	-1.156	-0.198	73	0.698	1.357	-0.861	115
84211	128	12.	-2.219	-4.913	1.994	205	-0.971	-0.382	-0.889	116
71940	201	2.	0.329	-0.839	0.368	11	-2.545	-1.844	-0.700	117
74BC0	202	1.	-0.878	-2.988	0.297	12	-1.498	-0.392	-0.793	118
74BE0	203	3.	-2.451	-2.787	-0.364	119	-0.589	0.181	-0.770	119
74BG0	204	1.	-0.788	-1.425	0.637	8	-0.703	0.793	-0.795	120
74BH0	205	2.	-0.971	-0.382	-0.589	114	-3.583	-2.782	-0.800	121
85BA0	206	2.	-0.887	-0.842	-0.045	35	-3.149	-2.334	-0.815	122
73JC0	207	7.	1.332	1.750	-0.418	93	-0.998	-0.149	-0.841	123
73JF0	208	0.	-1.009	-1.898	-0.113	82	0.885	1.982	-0.897	124
71CA0	209	4.	-0.345	-0.425	0.079	22	-3.586	-2.583	-0.923	125
71GA0	210	0.	-1.989	-2.398	0.487	184	-0.812	0.368	-0.978	126
89AA0	811	8.	-0.593	-0.888	0.295	182	-0.899	0.414	-1.823	127


D&R MODEL RUN130 DEP VAR IS LLSCFD
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
RESIDUALS
0
NEGATIVE
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID


BBR MODEL RUN138 DEP VAR 1: LLSCFD
RESIDUAL VS. FITTED Y
-4.101
-1.198
1.002
POSITIVE
0
NEGATIVE
RESIDUALS
-4.101
-1.198
1.002
FITTED Y

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

B&R MODEL RUN148 DEP VAR IS LMHTOT MIN Y = -7.8980 00 MAX Y = -8.4590-01 RANGE Y = 8.5440 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPOS" MODEL

LMHTOT = B(0) + B(1)FIGSEN + B(2)FIGCOM + B(3)BOMNAV + B(4)BOMCOM
+ B(5)CO + B(6)SS + B(7)MOI + B(C)MEM + B(9)MPS
+ B(10)DUP + B(11)OCC + B(12)ODI + B(13)DEM + B(14)DPS
+ B(15)DUP + B(16)LUP + B(17)LVO + B(18)LWT

LMHTOT = LN(MMHTOT)

MMHTOT = TOTAL MAINTENANCE MANHOURS PER OPERATING HOUR

IND.VAR(I)	NAME	COEF.B(I)	S.E. COEF.	T-VALUE	B(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL.INF.X(I)
0		-9.535480 00							
1	FIGSEN	-1.894430-01	1.220-01	1.6	0.3217	0.0	1.0000 00	1.0000 00	0.03
2	FIGCOM	5.3747D0-01	1.720-01	3.1	0.8703	0.0	1.0000 00	1.0000 00	0.06
3	BOMNAV	5.738710-01	1.280-01	4.5	2.2849	0.0	1.0000 00	1.0000 00	0.09
4	BOMCOM	6.611210-01	1.600-01	4.1	0.1571	0.0	1.0000 00	1.0000 00	0.10
5	CO	2.825190-01	3.960-02	8.8	0.3632	4.9230-03	8.6740 00	8.6690 00	0.27
6	SS	-1.515330-02	1.920-03	7.9	0.8779	0.0	1.0000 02	1.0000 02	0.23
7	MOI	-1.259230-02	1.350-03	9.3	0.4499	-2.4980 01	7.5100 01	1.0000 02	0.19
8	MEM	-2.388540-02	2.320-03	10.2	0.5885	-1.0200 01	8.9400 01	1.0000 02	0.36
9	MPS	-3.564480-03	2.840-03	1.8	0.1235	-5.8180 00	9.4990 01	1.0000 02	0.05
10	DUP	2.131730-12	2.550-12	0.8	0.1699	3.6910 05	1.4360 11	1.4360 11	0.05
11	OCC	-3.728840-08	1.160-08	3.2	0.2751	7.2980 02	2.8560 07	2.8560 07	0.10
12	ODI	1.382880-04	6.780-05	2.4	0.2229	1.6800-01	3.2910 03	3.2910 03	0.07
13	DEM	-2.245980-04	6.830-05	3.8	0.4771	2.7840 01	3.0470 03	3.0240 03	0.09
14	DPS	-1.974220-04	1.490-04	1.8	0.2689	9.4280 01	2.8630 03	2.7880 03	0.08
15	DUP	2.568730-01	1.320-01	1.9	0.1828	2.8250-01	2.1830 00	1.9000 00	0.07
16	LUP	5.551880-01	4.170-02	13.3	0.6974	5.8380 00	1.3250 01	8.2170 00	0.70
17	LVO	2.183910-01	1.910-01	2.2	0.0981	3.4810 00	9.6120 00	5.6110 00	0.19
18	LWT	3.284560-01	1.040-01	3.1	0.0915	0.0	5.1570 00	5.1570 00	0.00

NO. OF OBSERVATIONS	130
NO. OF IND. VARIABLES	19
RESIDUAL DEGREES OF FREEDOM	111
F-VALUE	78.3
RESIDUAL ROOT MEAN SQUARE	0.42593686
RESIDUAL MEAN SQUARE	0.18142221
RESIDUAL SUM OF SQUARES	20.13788527
TOTAL SUM OF SQUARES	249.59267129
MULT. CORREL. COEF. SQUARED	.9193

IND.VAR(I)	NAME	COEF.B(I)	MIN X(I)	MAX X(I)	RANGE X(I)	REL.INF.X(I)
*** COEFFICIENTS FROM PREVIOUS FIT ***						
0		-9.995570 00				
1	FIGSEN	-1.827490-01	0.0	1.0000 00	1.0000 00	0.03
2	FIGCOM	5.787930-01	0.0	1.0000 00	1.0000 00	0.09
3	BOMNAV	6.387720-01	0.0	1.0000 00	1.0000 00	0.10
4	BOMCOM	7.095640-01	0.0	1.0000 00	1.0000 00	0.11
5	CO	2.897540-01	4.9230-03	8.6740 00	8.6690 00	0.27
6	SS	-1.581720-02	0.0	1.0000 02	1.0000 02	0.24
7	MOI	-1.267150-02	-2.4980 01	7.5100 01	1.0000 02	0.19
8	MEM	-2.386750-02	-1.0200 01	8.9400 01	1.0000 02	0.38
9	MPS	-3.627130-03	-5.8180 00	9.4990 01	1.0000 02	0.06
10	DUP	5.888710-12	3.6910 05	1.4360 11	1.4360 11	0.12
11	OCC	-3.138990-08	7.2980 02	2.8560 07	2.8560 07	0.14
12	ODI	1.489280-04	1.6800-01	3.2910 03	3.2910 03	0.07
13	DEM	-2.144390-04	2.7840 01	3.0470 03	3.0240 03	0.10
14	DPS	-1.928630-04	9.4280 01	2.8630 03	2.7880 03	0.08
15	DUP	3.281940-01	2.8250-01	2.1830 00	1.9000 00	0.08
16	LUP	5.857720-01	5.8380 00	1.3250 01	8.2170 00	0.75
17	LVO	2.282820-01	3.4810 00	9.6120 00	5.6110 00	0.19
18	LWT	2.998870-01	0.0	5.1570 00	5.1570 00	0.04

RESIDUAL ROOT MEAN SQUARE	0.43352282
RESIDUAL MEAN SQUARE	0.18794187
RESIDUAL SUM OF SQUARES	20.86154708
TOTAL SUM OF SQUARES	249.59267129
MULT. CORREL. COEF. SQUARED	.9183

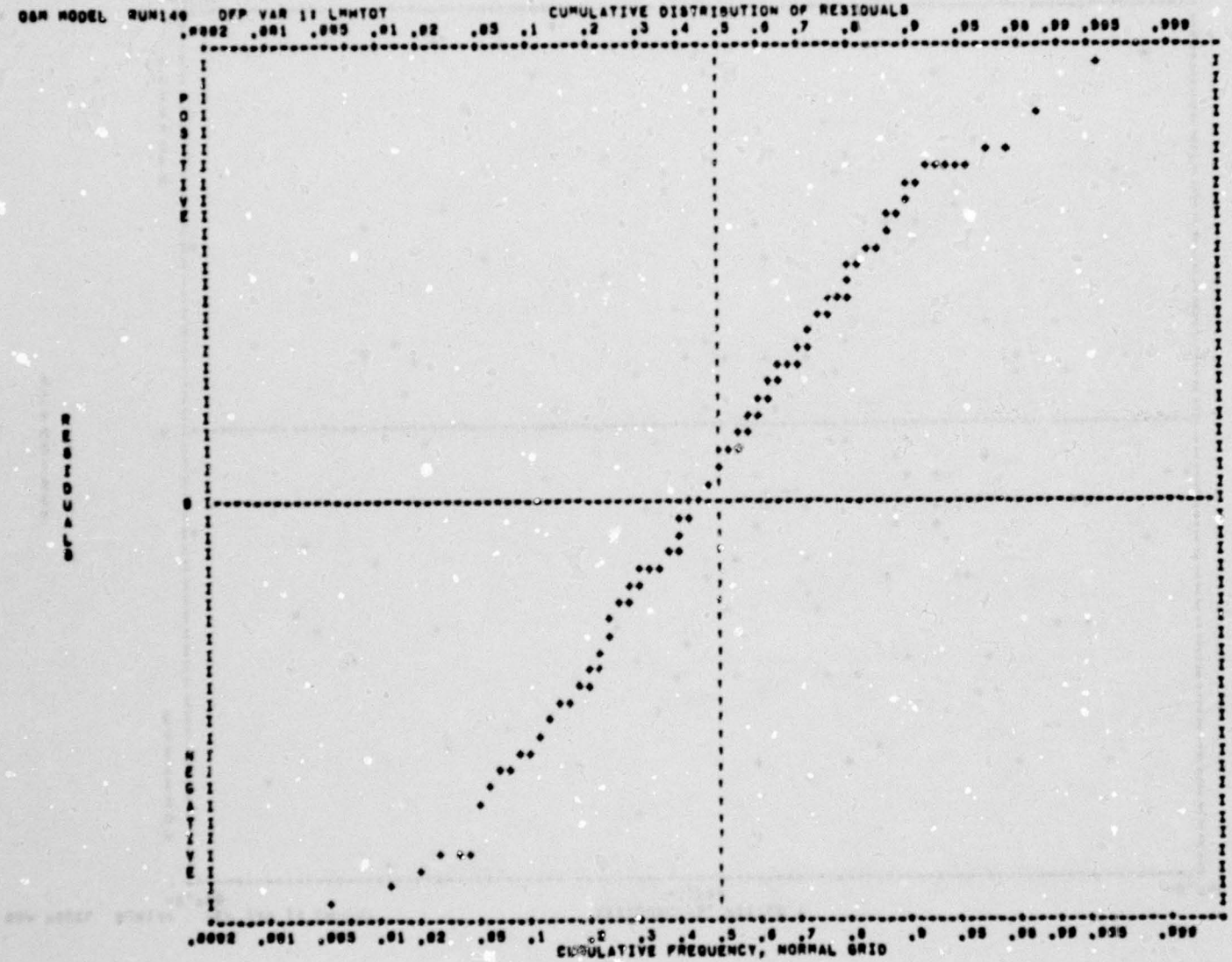
ORDERED BY CUMULATIVE INPUT

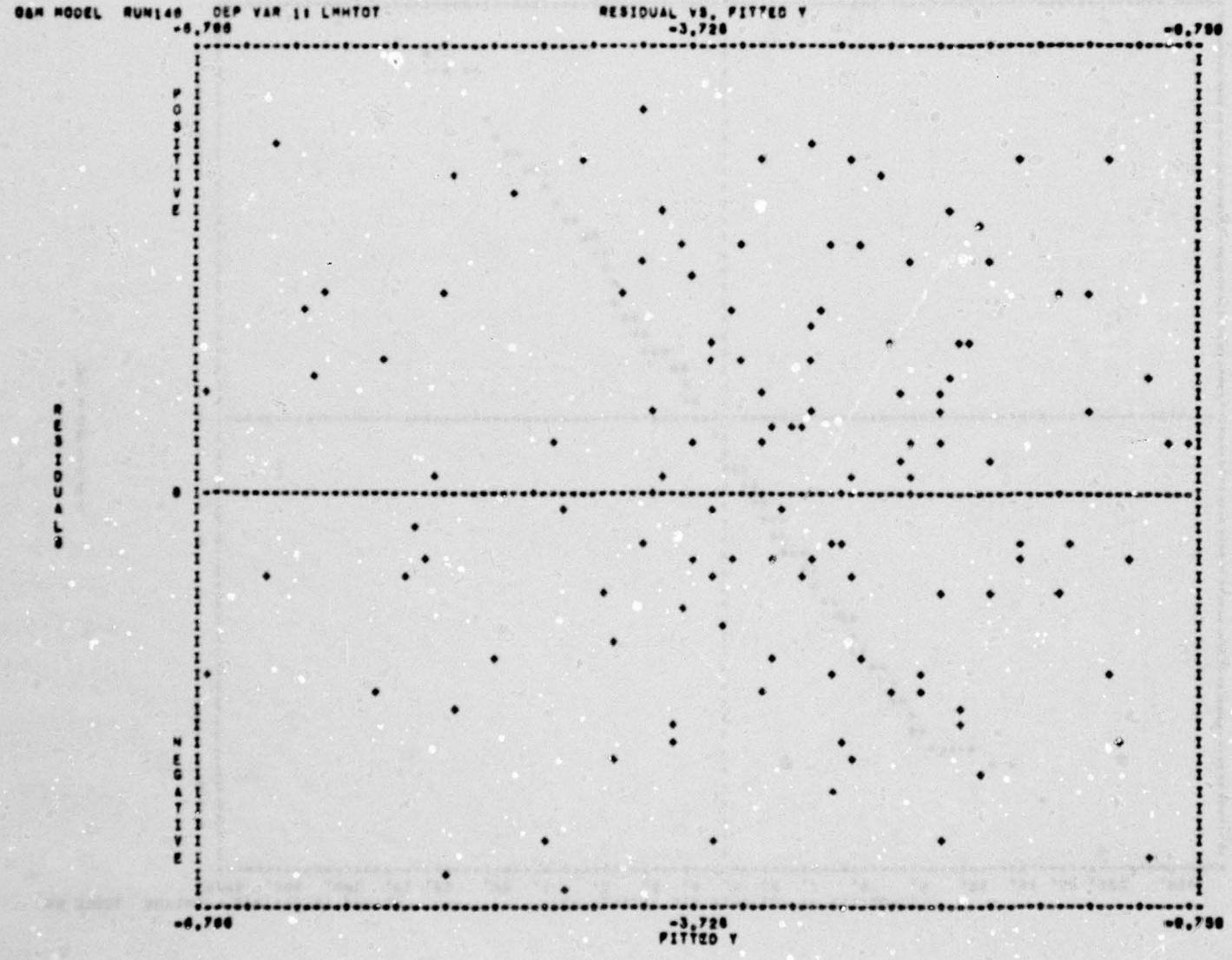
IDENT.	OBSV.	NSS DISTANCE	OBS. Y	FITTED Y	RESIDUAL
71020	1	1.	-3,305	-3,221	-0,183
71L40	2	6.	-2,971	-2,231	-0,748
71H80	3	21.	-2,855	-3,007	0,152
71PK0	4	2.	-3,099	-3,124	0,115
71P80	5	7.	-3,637	-3,578	-0,059
71710	6	17.	-6,681	-6,842	0,382
724G0	7	11.	-6,923	-5,681	-0,422
71FA0	8	4.	-3,875	-3,888	0,012
71F80	10	14.	-3,992	-3,976	-0,016
71CA0	11	4.	-5,328	-4,663	-0,657
71DA0	12	3.	-3,344	-2,779	-0,565
51EA0	13	5.	-3,292	-3,089	0,787
72AA0	14	8.	-3,314	-3,872	0,557
72A80	15	9.	-3,322	-3,615	0,293
838D9	16	9.	-5,497	-5,328	-0,171
71AE0	17	28.	-1,425	-1,981	0,556
74JA0	18	6.	-2,432	-2,288	-0,228
74JC0	19	8.	-3,649	-3,594	-0,145
52GA1	20	3.	-3,718	-4,188	0,678
71IA0	21	5.	-4,368	-3,847	-0,521
73EG0	24	12.	-2,218	-2,529	0,313
73EP0	25	23.	-1,978	-1,743	0,673
73HA0	26	23.	-0,793	-0,877	0,884
73HC0	27	14.	-1,879	-1,766	-0,113
73NA0	28	28.	-2,392	-2,492	0,198
73080	29	11.	-2,137	-1,988	-0,229
73SC0	30	12.	-3,217	-3,174	-0,043
73K80	31	2.	-2,399	-2,918	0,512
73KE0	32	4.	-3,494	-2,858	-0,639
73KF0	33	3.	-3,988	-3,735	-0,187
73KK0	34	12.	-2,728	-2,987	0,267
79938	35	7.	-4,783	-5,178	0,395
74800	36	5.	-2,739	-2,888	0,258
748F0	37	3.	-3,091	-2,898	-0,193
74810	38	35.	-5,473	-5,372	-0,101
76K10	39	6.	-4,426	-4,218	-0,287
76GA0	40	9.	-3,618	-3,243	-0,375
74FF0	41	26.	-2,760	-2,375	-0,385
74FA0	42	18.	-1,775	-1,010	-0,765
74FH0	43	6.	-2,553	-2,915	0,362
74FU0	44	40.	-1,947	-2,685	0,658
73CG0	45	36.	-4,897	-3,991	-0,107
74FC0	48	12.	-1,925	-1,982	0,057
74FJ0	49	3.	-2,929	-2,513	-0,416
74FK0	50	9.	-5,499	-6,217	0,718
74F00	51	20.	-2,919	-2,221	0,201
74KA0	52	7.	-2,881	-2,225	0,143
74KC0	53	7.	-3,184	-3,437	0,253
74CA0	54	5.	-4,335	-3,583	-0,752
74C80	55	7.	-4,338	-3,834	-0,498
74CC0	56	8.	-4,558	-4,582	-0,047
74FA1	57	9.	-2,859	-2,848	-0,010
74E80	58	7.	-3,145	-3,407	0,261
73PH0	59	4.	-3,957	-3,768	-0,190
73080	60	36.	-0,657	-0,758	0,893
73PD0	61	18.	-0,918	-1,322	0,413
73PF0	62	24.	-2,883	-2,186	-0,697
73PH0	63	5.	-2,880	-2,784	0,875
71NA0	64	6.	-1,943	-2,401	0,458
710U0	65	4.	-2,358	-2,481	0,033
63AA0	66	3.	-2,416	-2,391	-0,025
65A40	67	4.	-2,752	-2,321	-0,431
63AG0	68	4.	-3,792	-3,954	0,163
638F0	70	14.	-5,631	-5,434	-0,197

ORDERED BY RESIDUALS

OBSV.	OBS. Y	FITTED Y	ORDERED RESID.	SEQ
210	-4,565	-5,468	0,903	1
13	-3,282	-3,989	0,707	2
201	-2,289	-3,013	0,724	3
50	-5,499	-6,217	0,718	4
84	-0,548	-1,238	0,684	5
209	-2,618	-3,389	0,882	6
29	-3,718	-4,388	0,670	7
83	-2,989	-2,764	0,675	8
25	-1,978	-1,743	0,673	9
44	-1,947	-2,685	0,658	10
198	-4,585	-5,168	0,655	11
74	-4,187	-4,792	0,585	12
119	-1,691	-2,178	0,569	13
14	-3,314	-3,872	0,557	14
17	-1,425	-1,981	0,556	15
118	-2,911	-3,428	0,518	16
31	-2,399	-2,918	0,512	17
98	-2,179	-2,696	0,507	18
211	-3,252	-3,749	0,497	19
204	-3,592	-3,988	0,486	20
84	-1,943	-2,401	0,458	21
188	-1,498	-1,951	0,453	22
202	-3,275	-3,721	0,446	23
61	-0,910	-1,322	0,413	24
35	-4,783	-5,178	0,395	25
118	-3,722	-4,114	0,392	26
128	-5,520	-5,907	0,387	27
83	-1,132	-1,515	0,383	28
8	-5,961	-6,342	0,382	29
194	-3,897	-3,493	0,387	30
43	-2,553	-2,915	0,362	31
89	-2,853	-3,201	0,347	32
24	-2,218	-2,529	0,313	33
181	-1,787	-2,084	0,297	34
15	-3,322	-3,615	0,293	35
199	-1,765	-2,053	0,289	36
203	-5,255	-5,532	0,277	37
34	-2,720	-2,987	0,267	38
58	-3,145	-3,407	0,261	39
53	-3,184	-3,437	0,253	40
38	-2,739	-2,998	0,258	41
99	-3,338	-3,587	0,250	42
77	-0,785	-1,011	0,228	43
98	-1,940	-2,155	0,215	44
98	-5,777	-5,998	0,213	45
51	-2,919	-2,221	0,201	46
125	-3,088	-3,288	0,191	47
28	-2,302	-2,492	0,198	48
88	-6,526	-6,706	0,180	49
68	-3,792	-3,954	0,163	50
207	-1,185	-1,348	0,158	51
3	-2,855	-3,007	0,152	52
52	-2,881	-2,225	0,143	53
85	-3,371	-3,218	0,139	54
4	-3,989	-3,124	0,115	55
208	-2,968	-3,078	0,108	56
121	-2,116	-2,219	0,103	57
126	-3,848	-3,733	0,093	58
68	-0,657	-0,758	0,893	59
113	-2,293	-2,381	0,088	60
28	-0,793	-0,877	0,884	61
71	-4,488	-4,589	0,881	62
123	-3,217	-3,298	0,079	63
95	-2,428	-2,485	0,065	64

71A8E	71	14.	-4.488	-4.569	0.081	48	-1.925	-1.982	0.057	65
71ADA	72	10.	-1.556	-1.445	-0.111	65	-2.388	-2.421	0.033	66
73D8A	73	18.	-1.737	-1.190	-0.547	97	-2.717	-2.741	0.023	67
71ACC	74	58.	-4.187	-4.792	0.605	9	-3.875	-3.886	0.012	68
73C8Q	75	53.	-5.613	-5.150	-0.463	76	-5.245	-5.253	0.007	69
73CEN	76	48.	-5.245	-5.253	0.007	79	-4.687	-4.676	-0.011	70
73CFK	77	7.	-2.785	-1.811	0.226	10	-3.992	-3.976	-0.015	71
73DAM	78	20.	-2.364	-2.182	-0.462	91	-1.565	-1.548	-0.017	72
73E8A	79	14.	-4.687	-4.676	-0.011	57	-2.859	-2.848	-0.010	73
73E9F	80	10.	-2.853	-3.881	0.347	66	-2.416	-2.391	-0.025	74
71CA8	81	10.	-4.756	-4.183	-0.571	38	-3.217	-3.174	-0.043	75
73EG8	82	15.	-1.949	-1.779	-0.170	56	-4.558	-4.592	-0.047	76
73MC8	83	15.	-1.132	-1.515	0.383	5	-3.637	-3.578	-0.059	77
73LAR	84	8.	-2.548	-1.238	0.684	38	-5.473	-5.372	-0.101	78
77EC8	85	1.	-3.471	-3.218	0.139	37	-3.881	-2.898	-0.183	79
77EE8	86	48.	-7.298	-6.786	-0.383	46	-4.897	-3.991	-0.187	80
77DB8	87	48.	-6.526	-5.786	0.188	72	-1.556	-1.445	-0.111	81
78AEA	89	8.	-1.231	-1.090	-0.141	27	-1.879	-1.766	-0.113	82
73KA8	90	7.	-1.948	-2.155	0.215	185	-2.949	-2.834	-0.115	83
63B4A	91	18.	-1.565	-1.548	-0.017	89	-1.231	-1.090	-0.141	84
63CAA	92	10.	-1.782	-1.548	-0.234	128	-3.118	-2.975	-0.142	85
69AAA	93	8.	-2.952	-2.758	-0.194	19	-3.849	-3.524	-0.325	86
6188A	94	5.	-2.596	-1.984	-0.613	1	-3.385	-3.221	-0.163	87
61AA8	95	6.	-2.428	-2.485	0.057	33	-3.888	-3.733	-0.157	88
61A98	96	8.	-2.179	-2.686	0.507	82	-1.649	-1.779	-0.170	89
61ACB	97	8.	-2.717	-2.741	0.023	16	-5.497	-5.326	-0.171	90
72AAP	98	28.	-5.777	-5.998	0.213	117	-6.471	-6.291	-0.180	91
72ACB	99	6.	-3.338	-3.567	0.259	59	-3.257	-3.268	-0.190	92
71CAB	100	13.	-1.498	-1.951	0.453	93	-2.952	-2.758	-0.194	93
72EAA	101	19.	-1.787	-2.084	0.297	79	-5.631	-5.434	-0.197	94
728PD	103	28.	-1.579	-1.197	-0.382	285	-3.793	-3.589	-0.203	95
71JA8	104	3.	-3.897	-3.463	0.367	39	-4.426	-4.218	-0.207	96
71LA8	105	5.	-2.948	-2.834	-0.113	18	-2.432	-2.208	-0.226	97
720N8	106	13.	-3.392	-2.844	-0.548	29	-2.137	-1.908	-0.229	98
72ACB	107	2.	-3.348	-2.984	-0.395	92	-1.782	-1.548	-0.234	99
71718	108	12.	-4.585	-5.168	0.656	127	-4.839	-3.794	-0.248	100
71310	109	14.	-1.745	-2.053	0.289	114	-3.801	-3.525	-0.276	101
72MF8	110	13.	-3.722	-4.114	0.392	228	-4.598	-4.168	-0.339	102
72M88	111	25.	-5.325	-4.576	-0.749	112	-5.265	-4.918	-0.347	103
71JCE	112	12.	-5.265	-4.918	-0.347	124	-3.274	-2.712	-0.362	104
72AE8	113	14.	-2.293	-2.381	0.088	48	-3.618	-3.243	-0.375	105
72CC8	114	4.	-3.871	-3.595	-0.276	183	-1.579	-1.197	-0.382	106
71Z98	115	15.	-5.972	-5.288	-0.882	86	-7.298	-6.786	-0.383	107
71208	117	84.	-6.471	-6.291	-0.180	41	-2.748	-2.375	-0.385	108
659AA	118	4.	-2.911	-3.428	0.518	187	-3.388	-2.984	-0.396	109
634F8	119	8.	-1.681	-2.178	0.589	49	-2.929	-2.513	-0.416	110
634A8	120	2.	-3.118	-2.975	-0.142	7	-5.923	-5.501	-0.422	111
63121	121	8.	-2.116	-2.219	0.103	67	-2.752	-2.321	-0.431	112
63AAA	122	14.	-3.744	-3.304	-0.440	122	-3.744	-3.304	-0.440	113
554L8	123	7.	-3.217	-3.296	0.079	78	-2.584	-2.122	-0.462	114
554V8	124	13.	-3.874	-2.712	-0.362	75	-5.613	-5.150	-0.463	115
61AA8	125	3.	-3.344	-3.288	0.191	55	-4.338	-3.834	-0.498	116
614EP	126	8.	-3.848	-3.733	0.093	82	-2.685	-2.188	-0.497	117
62AA8	127	5.	-4.939	-3.794	-0.246	21	-4.388	-3.847	-0.521	118
64211	128	17.	-5.528	-5.987	0.387	73	-1.737	-1.190	-0.547	119
715A8	201	2.	-2.289	-3.013	0.724	186	-3.392	-2.844	-0.548	120
748C8	202	1.	-3.275	-3.721	0.446	12	-3.344	-2.779	-0.565	121
749E8	203	6.	-5.255	-5.532	0.277	81	-4.754	-4.183	-0.571	122
748G8	204	2.	-3.542	-3.988	0.446	94	-2.595	-1.984	-0.613	123
748M8	205	3.	-3.793	-3.589	-0.203	32	-3.494	-2.856	-0.639	124
658A8	206	4.	-2.988	-3.076	0.188	2	-2.971	-2.231	-0.740	125
73JC8	207	8.	-1.185	-1.348	0.156	111	-5.325	-4.576	-0.749	126
73JF8	208	9.	-4.538	-4.188	-0.339	54	-4.335	-3.583	-0.752	127
71CA8	209	8.	-2.618	-3.300	0.682	42	-1.775	-1.010	-0.765	128
716A8	210	17.	-4.585	-5.468	0.983	116	-6.082	-5.288	-0.892	129
68AA8	211	2.	-3.258	-3.749	0.497	11	-5.389	-4.483	-0.857	130


GSM MODEL RUN146 DEP VAR 11 LHHTOT
CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
0
NEGATIVE
SPACINGER
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID


G&M MODEL RUN148 DEP VAR IS LHHTOT
RESIDUAL VS. FITTED Y
-6.786
-3.726
-0.786
POSITIVE
0
NEGATIVE
RESIDUALS
-6.786
-3.726
-0.786
FITTED Y

LINEAR LEAST-SQUARES CURVE FITTING PROGRAM

B&R MODEL RUN190 DEP VAR IS LMMUNS MIN Y = -7.4770 00 MAX Y = -1.0320 00 RANGE Y = 6.0450 00

MULTIPLE REGRESSION ANALYSIS FOR THE "ALPOS" MODEL
LMMUNS = B(0) + B(1)FIGSEN + B(2)FIGCOM + B(3)BOMNAV + B(4)BOMCOM
+ B(5)DI + B(6)SS + B(7)MCC + B(8)MEM + B(9)MPO
+ B(10)OCC + B(11)OCO + B(12)OEM + B(13)OPO + B(14)OUP
+ B(15)LUP + B(16)LWT + B(17)LPO
LMMUNS = LN(MMMUNS)
MMMUNS = UNSCHEDULED MAINTENANCE MANHOURS PER OPERATING HOUR

IND.VAR(I)	NAME	COEF.B(I)	S.E. COEF.	T-VALUE	B(I)SQRD	MIN X(I)	MAX X(I)	RANGE X(I)	REL.IMP.X(I)
0		-9.658290 00							
1	FIGSEN	-2.682480-01	1.030-01	2.5	0.2333	0.0	1.0000 00	1.0000 00	0.04
2	FIGCOM	2.465920-01	1.810-01	1.4	0.1187	0.0	1.0000 00	1.0000 00	0.04
3	BOMNAV	8.583380-01	1.370-01	6.2	0.2761	0.0	1.0000 00	1.0000 00	0.15
4	BOMCOM	4.388010-01	1.580-01	2.7	0.1136	0.0	1.0000 00	1.0000 00	0.08
5	DI	-7.641290-03	1.420-03	5.4	0.4783	0.0	1.0000 02	1.0000 02	0.13
6	SS	-1.854660-02	1.990-03	5.3	0.6836	0.0	1.0000 02	1.0000 02	0.18
7	MCC	1.775530-04	4.810-05	4.4	0.5293	-1.1680 03	7.1290 03	8.2960 03	0.25
8	MEM	-1.748860-02	2.420-03	7.2	0.5946	-1.0290 01	8.0000 01	1.0290 02	0.39
9	MPO	-5.597950-04	1.630-04	3.4	0.7577	-3.3280 02	2.6650 03	2.9970 03	0.29
10	OCC	-4.266940-08	1.250-08	3.4	0.3356	7.2990 02	2.8560 07	2.8560 07	0.21
11	OCO	5.815850-07	1.980-02	2.5	0.2871	1.7840-04	1.8810 01	1.8810 01	0.16
12	OEM	-1.833520-04	7.820-05	2.3	0.8794	2.7840 01	3.8470 03	3.8290 03	0.08
13	OPO	3.618620-07	1.380-07	2.6	0.5812	7.2980 02	4.1890 06	4.1880 06	0.25
14	OUP	4.942980-01	1.480-01	3.5	0.1544	2.8250-01	2.1830 00	1.9880 00	0.16
15	LUP	4.454820-01	4.180-02	10.7	0.6628	5.0380 00	1.3250 01	8.2170 00	0.63
16	LWT	3.851830-01	8.870-02	4.4	0.7364	0.0	5.1570 00	5.1570 00	0.27
17	LPO	2.442390-01	8.970-02	3.5	0.0582	1.0000 00	8.0060 00	8.0060 00	0.20

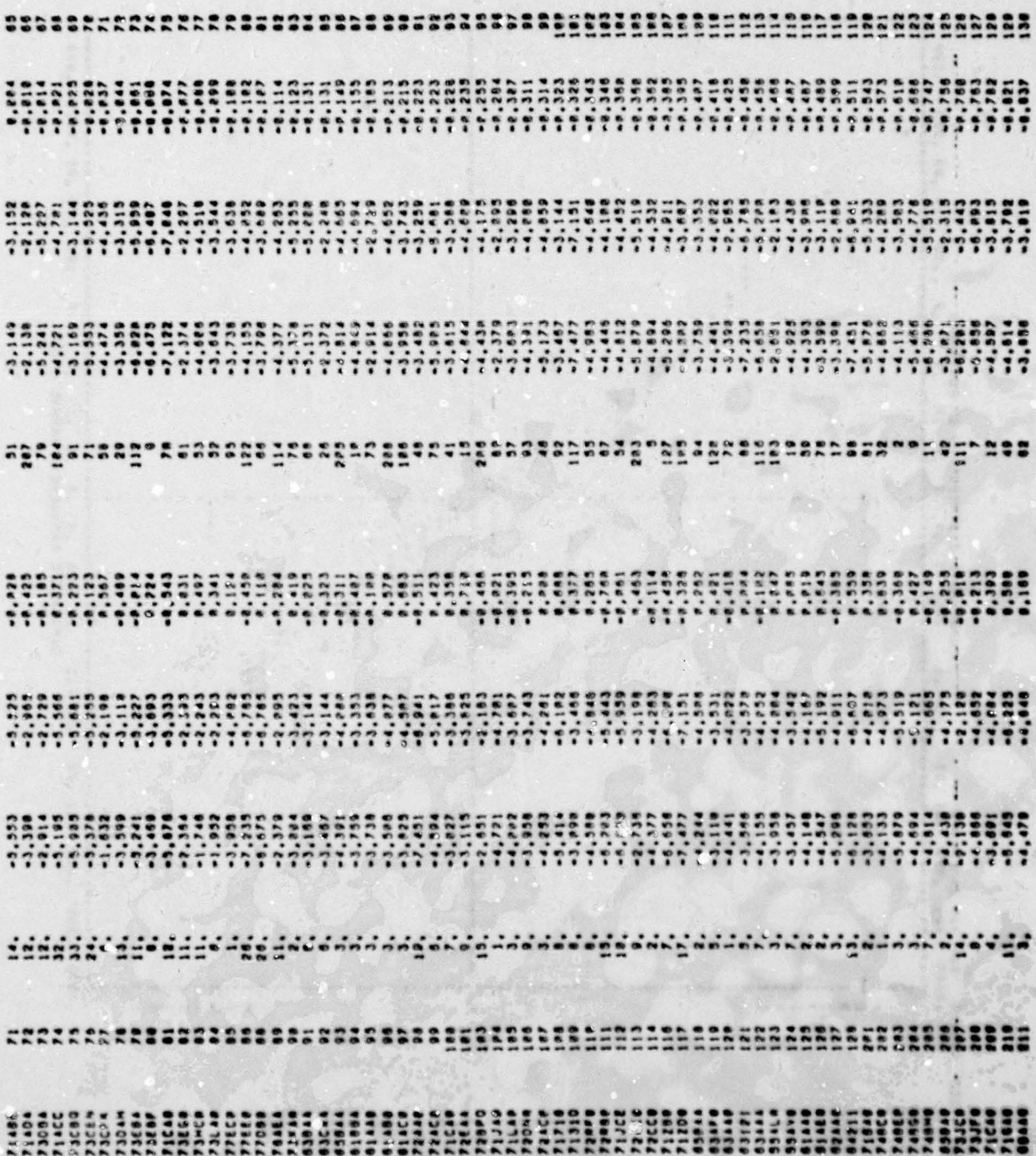
NO. OF OBSERVATIONS	130
NO. OF IND. VARIABLES	17
RESIDUAL DEGREES OF FREEDOM	112
F-VALUE	94.9
RESIDUAL ROOT MEAN SQUARE	0.43712272
RESIDUAL MEAN SQUARE	0.19107827
RESIDUAL SUM OF SQUARES	21.40854244
TOTAL SUM OF SQUARES	199.88678887
MULT. CORREL. COEF. SQUARED	.8929

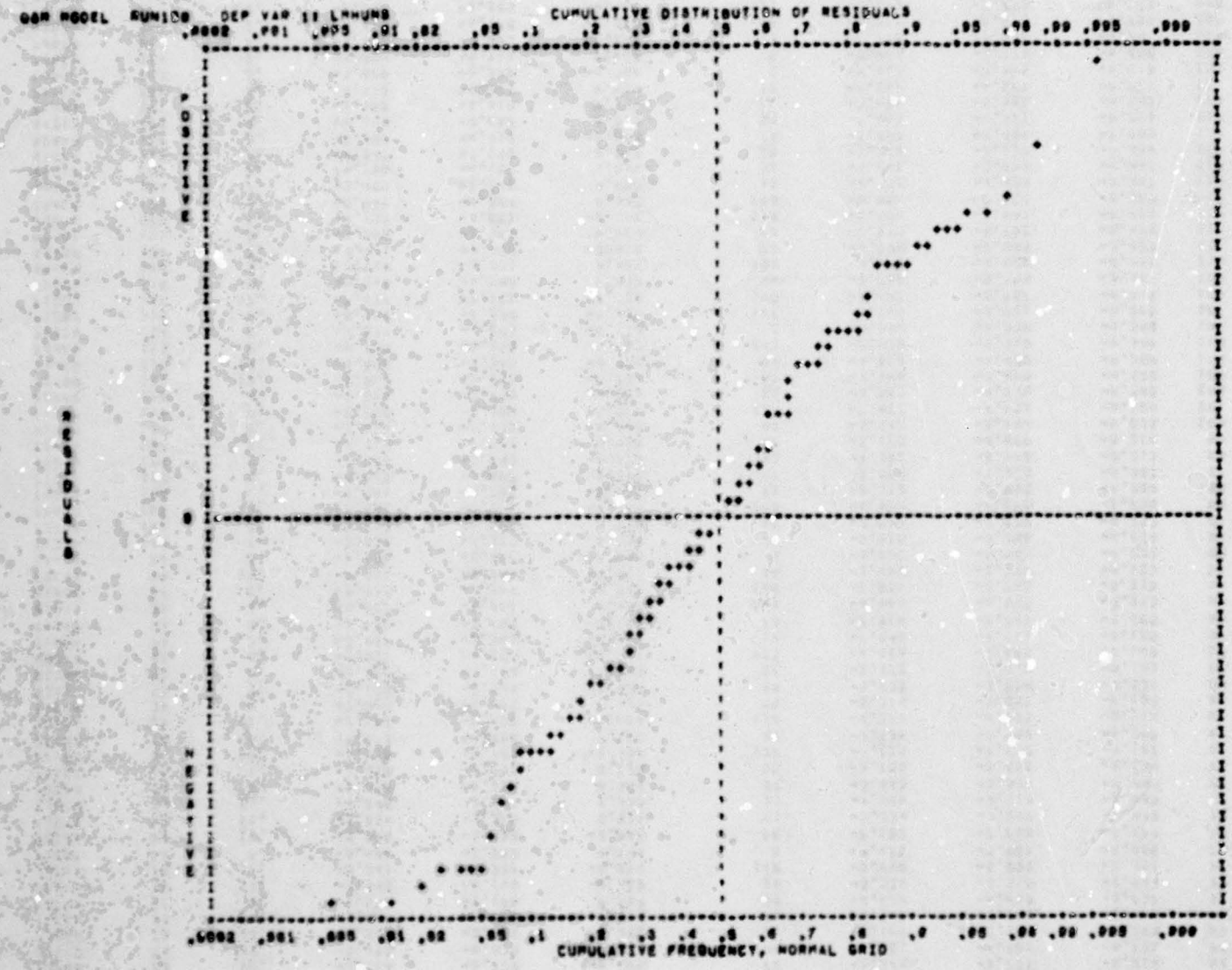
IND.VAR(I)	NAME	COEF.B(I)	MIN X(I)	MAX X(I)	RANGE X(I)	REL.IMP.X(I)
*** COEFFICIENTS FROM PREVIOUS FIT ***						
0		-9.983140 00				
1	FIGSEN	-2.757310-01	0.0	1.0000 00	1.0000 00	0.05
2	FIGCOM	3.417140-01	0.0	1.0000 00	1.0000 00	0.06
3	BOMNAV	9.223270-01	0.0	1.0000 00	1.0000 00	0.16
4	BOMCOM	4.788190-01	0.0	1.0000 00	1.0000 00	0.08
5	DI	-7.583470-03	0.0	1.0000 02	1.0000 02	0.13
6	SS	-1.868850-02	0.0	1.0000 02	1.0000 02	0.18
7	MCC	1.783540-04	-1.1680 03	7.1290 03	8.2960 03	0.24
8	MEM	-1.791490-02	-1.0290 01	8.0000 01	1.0290 02	0.31
9	MPO	-5.463250-04	-3.3280 02	2.6650 03	2.9970 03	0.28
10	OCC	-4.035410-08	7.2990 02	2.8560 07	2.8560 07	0.20
11	OCO	6.179330-02	1.7840-04	1.8810 01	1.8810 01	0.20
12	OEM	-1.476940-04	2.7840 01	3.8470 03	3.8290 03	0.08
13	OPO	3.476580-07	7.2980 02	4.1890 06	4.1880 06	0.24
14	OUP	5.262740-01	2.8250-01	2.1830 00	1.9880 00	0.17
15	LUP	4.548940-01	5.0380 00	1.3250 01	8.2170 00	0.65
16	LWT	2.781210-01	0.0	5.1570 00	5.1570 00	0.20
17	LPO	2.388750-01	1.0000 00	8.0060 00	8.0060 00	0.30

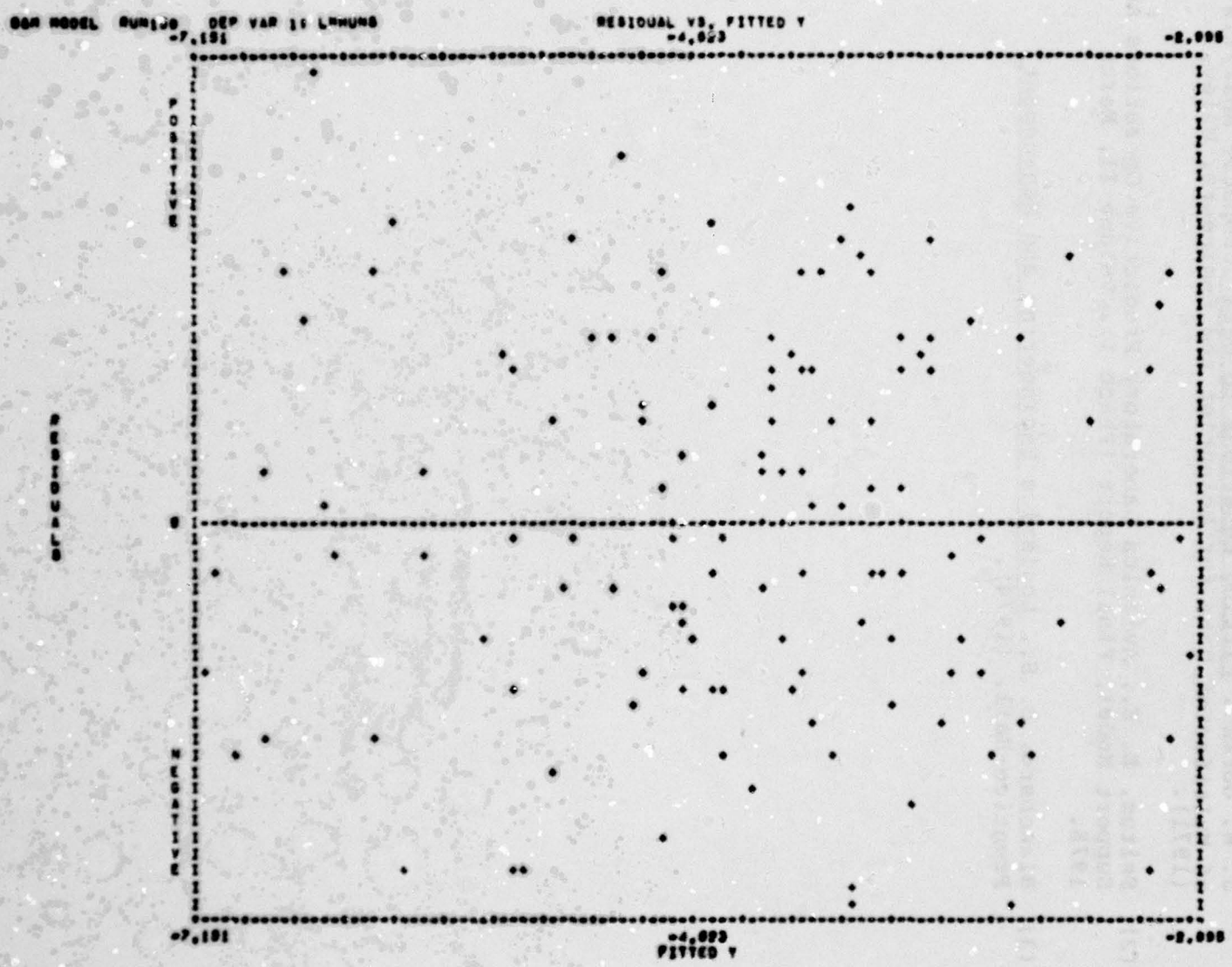
RESIDUAL ROOT MEAN SQUARE	0.43847259
RESIDUAL MEAN SQUARE	0.19013618
RESIDUAL SUM OF SQUARES	21.29124938
TOTAL SUM OF SQUARES	199.88678887
MULT. CORREL. COEF. SQUARED	.8918

IDENT,	OBSV,	ABA DISTANCE	ORDERED BY COMPUTER INPUT OBS, Y	FITTED Y	RESIDUAL
F1B2@	1	1.	-4.158	-4.278	0.129
F1L5@	2	3.	-4.113	-3.583	-0.610
F1M6@	3	13.	-3.797	-4.218	0.421
F1P4@	4	1.	-5.897	-4.285	0.388
F1P9@	5	4.	-4.894	-4.532	-0.362
F1T1@	6	11.	-6.475	-6.497	0.022
F24G@	7	7.	-6.856	-6.893	0.037
F1F4@	9	1.	-5.466	-4.778	-0.688
F1P8@	10	6.	-4.849	-4.694	-0.155
F1CA@	11	4.	-6.269	-5.519	-0.747
F1D4@	12	2.	-4.597	-3.815	-0.782
51EA@	13	2.	-4.396	-4.818	0.422
32GA@	14	2.	-4.836	-4.877	0.040
52A8@	15	4.	-4.840	-4.699	-0.235
63J0@	16	9.	-6.419	-6.468	0.041
F1AE@	17	12.	-3.398	-2.899	-0.599
F4J6@	18	2.	-3.811	-3.871	0.060
F4JC@	19	5.	-4.925	-4.438	-0.487
52GA1	20	6.	-4.155	-4.740	0.585
F1Z4@	21	2.	-4.689	-4.784	0.096
F3EG@	24	7.	-2.748	-3.395	0.655
F3EP@	25	15.	-2.337	-2.590	0.254
F3HA@	26	18.	-2.372	-2.240	-0.131
F3HC@	27	8.	-2.543	-2.967	0.425
F3HA@	28	19.	-3.287	-3.650	0.363
F3QC@	29	6.	-3.359	-3.315	-0.044
F38C@	30	7.	-3.743	-4.082	0.339
F3K8@	31	1.	-3.347	-3.933	0.586
F3KE@	32	5.	-4.882	-4.289	-0.593
F3KF@	33	3.	-4.589	-4.744	0.075
F3KK@	34	9.	-4.916	-4.148	0.132
F593@	35	8.	-6.493	-6.521	1.028
F4B0@	36	3.	-3.968	-4.195	0.234
F4BF@	37	4.	-3.836	-4.169	0.333
F481@	38	19.	-5.836	-5.962	0.126
F6A1@	39	4.	-5.115	-5.340	0.225
F6GA@	40	11.	-4.189	-4.255	0.156
FCFF@	41	20.	-3.815	-3.588	-0.228
F4FA@	42	18.	-3.971	-2.315	-0.756
F4FH@	43	7.	-3.582	-3.927	0.245
F4FU@	44	27.	-3.293	-3.653	0.059
F3CG@	45	21.	-5.173	-4.859	-0.314
F4FC@	46	7.	-3.492	-3.259	-0.223
F4FJ@	49	2.	-4.614	-3.792	-0.821
F4FK@	50	6.	-6.134	-6.579	0.445
F3F0@	51	20.	-3.149	-3.152	0.004
F4KA@	52	4.	-3.543	-3.544	-0.999
F4KC@	53	4.	-4.806	-4.518	-0.288
F4CA@	54	3.	-4.812	-4.452	-0.359
F4CB@	55	3.	-4.993	-4.648	-0.343
F4CC@	56	4.	-5.167	-5.518	0.349
F4FA1	57	8.	-3.693	-3.295	-0.397
F4EB@	58	4.	-4.474	-4.435	-0.037
F3PH@	59	3.	-4.393	-3.906	-0.487
F3P8@	60	21.	-2.989	-2.578	0.589
F3P0@	61	31.	-2.374	-2.297	-0.077
F3PF@	62	14.	-3.856	-3.019	-0.837
F3PH@	63	3.	-3.188	-3.755	0.594
F1NA@	64	2.	-3.131	-3.700	0.568
F1GU@	65	2.	-3.519	-3.788	0.268
63AA@	66	1.	-3.796	-3.689	-0.107
6FAA@	67	2.	-4.445	-4.100	-0.345
634G@	68	3.	-5.131	-5.000	-0.131
638F@	70	12.	-7.122	-7.048	-0.074

OBSV,	ORS, Y	FITTED Y	ORDERED RESID,	SEQ
35	-5.493	-6.521	1.028	1
202	-4.133	-4.973	0.839	2
191	-3.115	-3.825	0.710	3
189	-5.414	-6.102	0.688	4
97	-3.825	-4.507	0.683	5
24	-2.748	-3.395	0.655	6
44	-3.293	-3.853	0.658	7
126	-4.047	-5.192	0.645	8
63	-3.160	-3.755	0.594	9
68	-2.889	-2.678	0.589	10
31	-3.347	-3.933	0.586	11
28	-4.155	-4.740	0.585	12
218	-5.645	-6.225	0.580	13
96	-3.598	-4.177	0.578	14
84	-3.131	-3.700	0.568	15
77	-1.832	-2.198	0.367	16
128	-6.128	-6.687	0.559	17
63	-1.746	-2.243	0.497	18
113	-2.736	-3.198	0.463	19
58	-6.134	-6.579	0.445	20
204	-4.694	-5.121	0.427	21
27	-2.543	-2.967	0.425	22
99	-4.542	-4.967	0.423	23
13	-4.396	-4.818	0.422	24
119	-3.119	-3.531	0.421	25
3	-3.797	-4.218	0.421	26
98	-3.084	-3.423	0.419	27
209	-3.691	-4.084	0.393	28
199	-3.799	-3.466	0.377	29
74	-5.195	-5.566	0.371	30
28	-3.287	-3.650	0.363	31
189	-3.027	-3.366	0.338	32
201	-3.653	-4.010	0.358	33
56	-5.167	-5.516	0.349	34
84	-1.952	-2.293	0.341	35
58	-3.743	-4.082	0.339	36
37	-3.856	-4.199	0.333	37
4	-3.897	-4.285	0.388	38
110	-4.580	-4.946	0.365	39
118	-4.244	-4.586	0.262	40
25	-2.337	-2.590	0.254	41
43	-3.582	-3.907	0.245	42
16	-4.836	-4.977	0.242	43
35	-3.968	-4.195	0.234	44
39	-5.115	-5.340	0.225	45
88	-3.469	-3.693	0.224	46
211	-4.479	-4.648	0.169	47
48	-4.109	-4.265	0.156	48
34	-4.016	-4.148	0.132	49
1	-4.158	-4.278	0.129	50
36	-5.836	-5.962	0.126	51
85	-3.968	-4.092	0.124	52
88	-6.875	-6.785	0.010	53
65	-3.810	-3.700	0.090	54
124	-3.457	-3.542	0.085	55
33	-4.669	-4.744	0.075	56
18	-3.811	-3.871	0.060	57
123	-3.958	-4.004	0.047	58
18	-6.419	-6.460	0.041	59
82	-2.364	-2.395	0.031	60
125	-4.148	-4.167	0.019	61
21	-4.689	-4.704	0.015	62
107	-4.253	-4.261	0.008	63
121	-3.565	-3.570	0.004	64




OSR MODEL RUN108 DEP VAR IS LRHUNS CUMULATIVE DISTRIBUTION OF RESIDUALS
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
POSITIVE
RESIDUALS
0
NEGATIVE
.0002 .001 .005 .01 .02 .05 .1 .2 .3 .4 .5 .6 .7 .8 .9 .95 .98 .99 .995 .999
CUMULATIVE FREQUENCY, NORMAL GRID


OSR MODEL RUN130 DEP VAR IS LNHUNS
RESIDUAL VS. FITTED Y
-7.191
-4.823
-2.455
POSITIVE
0
NEGATIVE
RESIDUALS
-7.191
-4.823
-2.455
FITTED Y

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